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U.S.B.M. PILOT HOLE "X"
HORSE DRAW, RIO BLANCO COUNTY
COLORADO

~~James E.
U.S. Bureau of
Denver Mining Research Center
Mine Engineering Group
Building 20, Denver Federal Center
Denver, CO 80225~~

VOLUME I - SECTION I
APPENDIX I: GEOPHYSICAL LOGS

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Prepared for
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

by

GOLDER ASSOCIATES, INC.
Kirkland (Seattle), Washington

FINAL REPORT

on

Contract No. S0261060

March 1977

TN
23
.M56
1977
no.103
v.2

1. Report No.		BLM Library D-553A, Building 50 Denver Federal Center P. O. Box 25047 Denver, CO 80225-0047		3. Recipient Accession No.	
4. Title and Subtitle U.S.B.M. PILOT HOLE "X", HORSE DRAW RIO BLANCO COUNTY, COLORADO VOLUME I - SECTION I: APPENDIX I				5. Report Date MARCH 1977	
				6.	
7. Author(s) L. A. READDY, D. L. PENTZ				8. Performing Organization Report No. S76029	
9. Performing Organization Name and Address GOLDER ASSOCIATES, INC. 10628 N.E. 38th Place Kirkland, Washington 98033				10. Project / Task / Work Unit No.	
				11. Contract or Grant No. S0261060	
12. Sponsoring Organization Name and Address Office of the Assistant Director - Mining Bureau of Mines Department of the Interior Washington, D.C. 20241				13. Type of Report FINAL	
				14.	
15. Supplementary Notes					
16. Abstract No text. A set of geophysical well logs for U.S.B.M. Pilot Hole "X", Piceance Creek Basin, Colorado.					
17. Originator's Key Words Geophysical Well Logs Pilot Hole "X", Piceance Creek Basin, Colorado				18. Availability Statement	
19. U.S. Security Classification of the Report		20. U.S. Security Classification of this Page		21. No. of Pages 7	22. Price

RESEARCH REPORT
No. 100
1955

CONTENTS

1. Directional Survey	1
2. 4-Step Caliper and Oilfield	2
3. Summary	3
4. Well Induction	4
5. Differential Temperature Log	5

163

Geer Atlas



Directional Survey

DRILLING COMPANY

5 "X"

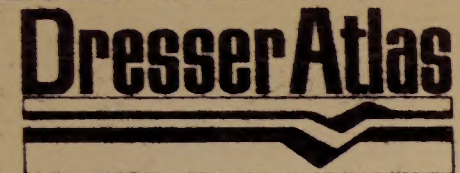
COLORADO

Other Services

W. H. ...
...
...
...
...

CONTENTS

1	Directional Survey
2	4-Actin Caliper and Depth
3	General
4	Dual Induction Forward Log
5	Ballistic Temperature Log



Directional Survey

FILE NO.	COMPANY	ESI DRILLING COMPANY	
	WELL	PILOT HOLE "X"	
	FIELD	RIO BLANCO	
	COUNTY	RIO BLANCO	STATE COLORADO
	LOCATION:	420' E OF WL; 1650' N OF SL	
	SEC	29	TWP 1-S RGE 97-W

Permanent Datum	GROUND LEVEL	Elev.	6284	KB	6288
Log Measured from	KB	4	Ft. Above Permanent Datum	DF	
Drilling Measured from	KB			GL	6284

Date	10-25-76				
Run No.	ONE				
Depth—Driller	2531				
Depth—Logger	2524				
Bottom Logged Interval	2521				
Top Logged Interval	200				
Casing—Driller	8-5/8@ 156	@	@	@	
Casing—Logger	NOT LOGGED				
Bit Size	6-1/4"				
Type Fluid in Hole	GEL				

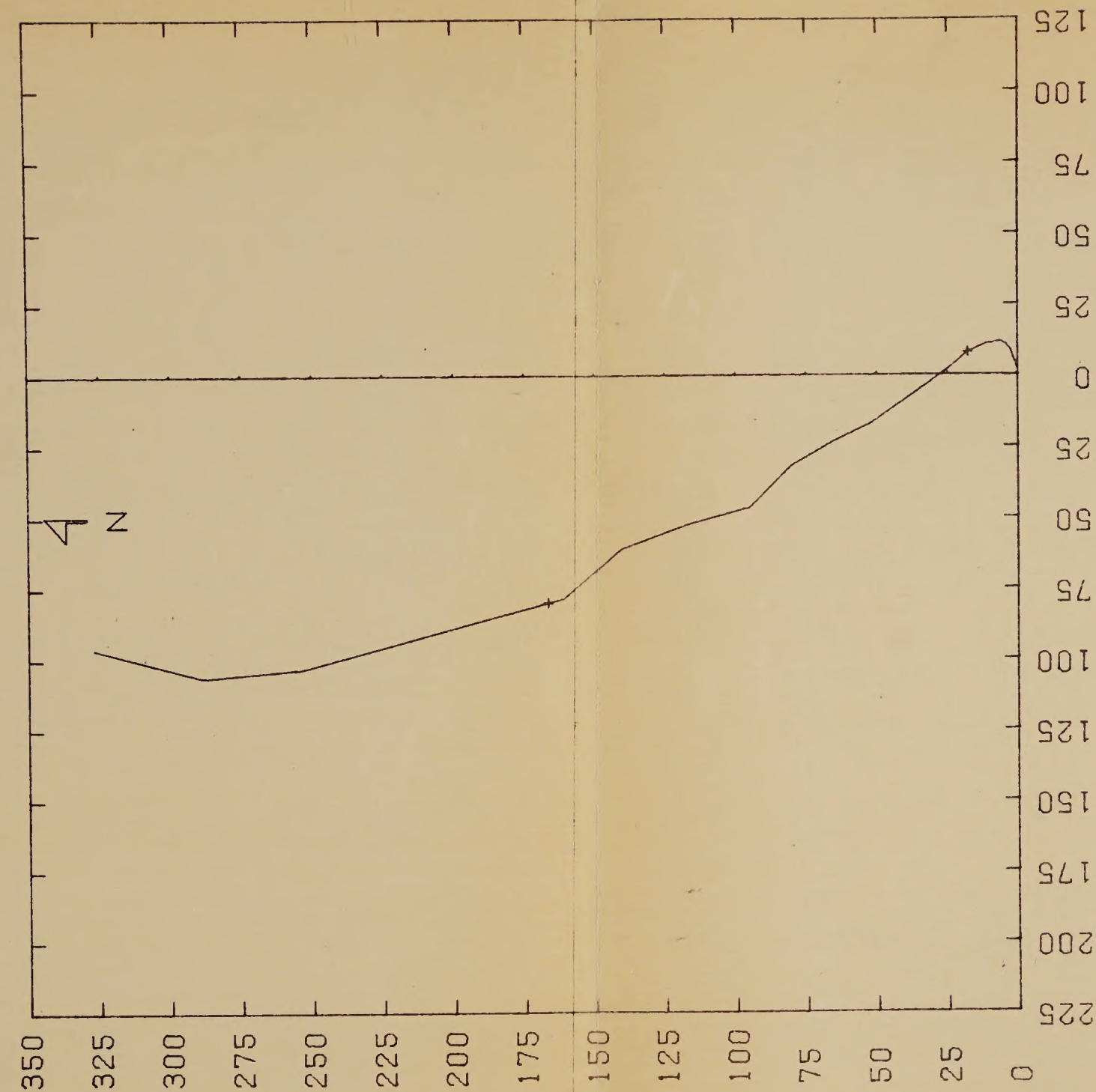
Density and Viscosity	8.5	38					
pH and Fluid Loss	8.5	6	cc		cc		cc
Source of Sample	FLOWLINE						
Rm @ Meas. Temp.	0.21 @ 48 °F	@	°F	@	°F	@	°F
Rmf @ Meas. Temp.	@ °F	@	°F	@	°F	@	°F
Rmc @ Meas. Temp.	@ °F	@	°F	@	°F	@	°F
Source of Rmf and Rmc							
Rm @ BHT	0.09 @ 113 °F	@	°F	@	°F	@	°F

Time Since Circ.					
Max. Rec. Temp. Deg. F.	113	°F		°F	
Equip. No. and Location	ROCK SPRINGS				
Recorded By	ALEX				
Witnessed By	SNOW				

THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP-31

Equipment Used					
Series No.	1006M				
Run No.	ONE				
S O	54923				
Tool No.	24348-15				
Elec. No.	24344-12				
Panel No.	30330				

N 16.39 W
340.71 FT.
96.17 W
326.86 N



#4971221

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DresserAtlas4-ARM CALIPER
AND ORIENTATION LOG

FILE NO.	COMPANY <u>ESI DRILLING CO. (For U.S.B.M.)</u>		
ROLL No.	WELL <u>PILOT HOLE - X</u>		
TO	FIELD <u>WILDCAT</u>		
	COUNTY <u>RIO BLANCO</u> STATE <u>COLORADO</u>		
TIGHT HOLE	LOCATION: <u>505 E/WL 1646 N/SL</u>		Other Services
	SEC <u>29</u> TWP <u>1S</u> RGE <u>97W</u>		DIFF. TEMP. CDL-GR DIFL
Permanent Datum <u>GROUND LEVEL</u> Elev. <u>6284</u>		Elevations:	
Log Measured from <u>K.B.</u> <u>4</u> Ft. Above Permanent Datum		KB <u>6288</u>	
Drilling Measured from <u>K.B.</u>		DF GL <u>6284</u>	
Date	<u>10-25-76</u>		
Run No.	<u>ONE</u>		
Depth—Driller	<u>2531</u>		
Depth—Logger	<u>2524</u>		
Bottom Logged Interval	<u>2521</u>		
Top Logged Interval	<u>200</u>		
Casing—Driller	<u>8 5/8 @ 156</u>	@	@
Casing—Logger	<u>NOT LOGGED</u>		
Bit Size	<u>6 1/4</u>		
Type Fluid in Hole	<u>GEL</u>		
Density and Viscosity	<u>8.5+</u> <u>38</u>		
pH and Fluid Loss	<u>8.5+</u> <u>6.0</u> cc	cc	cc
Source of Sample	<u>FLOWLINE</u>		
Rm @ Meas. Temp.	<u>.21 @ 48 °F</u>	@ °F	@ °F
Rm @ BHT	<u>.09 @ 113 °F</u>	@ °F	@ °F
Magnetic Declination	<u>15° E</u>		
Tool Type	<u>1006</u>		
Tool Number	<u>24348-15</u>		
Pad Type	<u>FOC-SWNAL</u>		
Equip. Location	<u>RS</u>		
Computed By	<u>---</u>		
Recorded By	<u>A. ALEX</u>		
Witnessed By	<u>MR. SNOW</u>		

FOLD HERE → **M.P.** THIS HEADING AND LOG CONFORMS TO API RECOMMENDED STANDARD PRACTICE RP-31

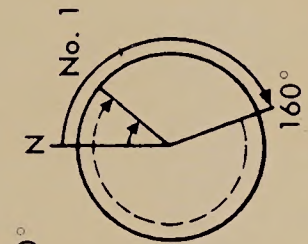
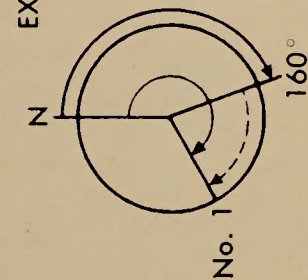
REMARKS

Equipment Used

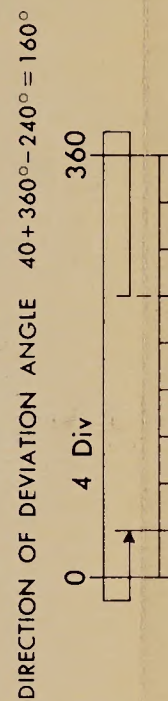
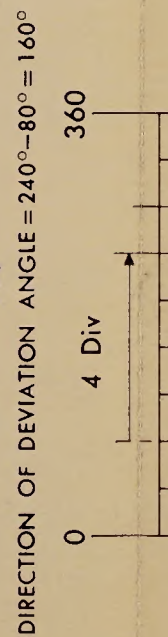
Series No.	1006		
Run No.	ONE		
S.O.	54923		
Tool No.	24348-15		
Elec. No.	24348-12		
Panel No.	30330		
Run No.		1	2
Data Logging Unit	27-60008		
Analog Panel No.	30330		
Digital Panel No.			
Correlated By			
Plotted By			

DIRECTION OF DEVIATION ANGLE
REFERRED TO MAGNETIC NORTH

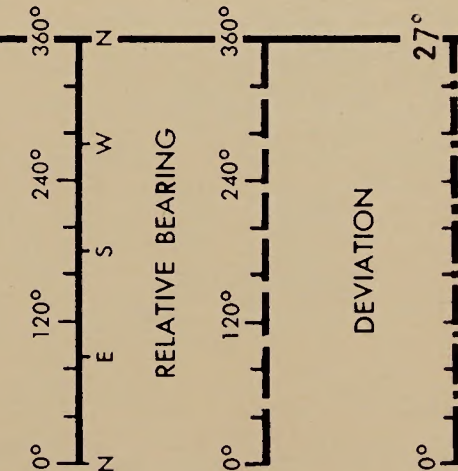
MEASURE TO THE RIGHT FROM DASHED TRACE (RELATIVE BEARING) TO SOLID TRACE (AZIMUTH OF No. 1 PAD) COUNTING 40° PER DIVISION



EXAMPLES: DIRECTION OF DRIFT = 160°



ORIENTATION

AZIMUTH NO. 1 ELECTRODE
FROM MAGNETIC NORTH

RELATIVE BEARING



DEVIATION

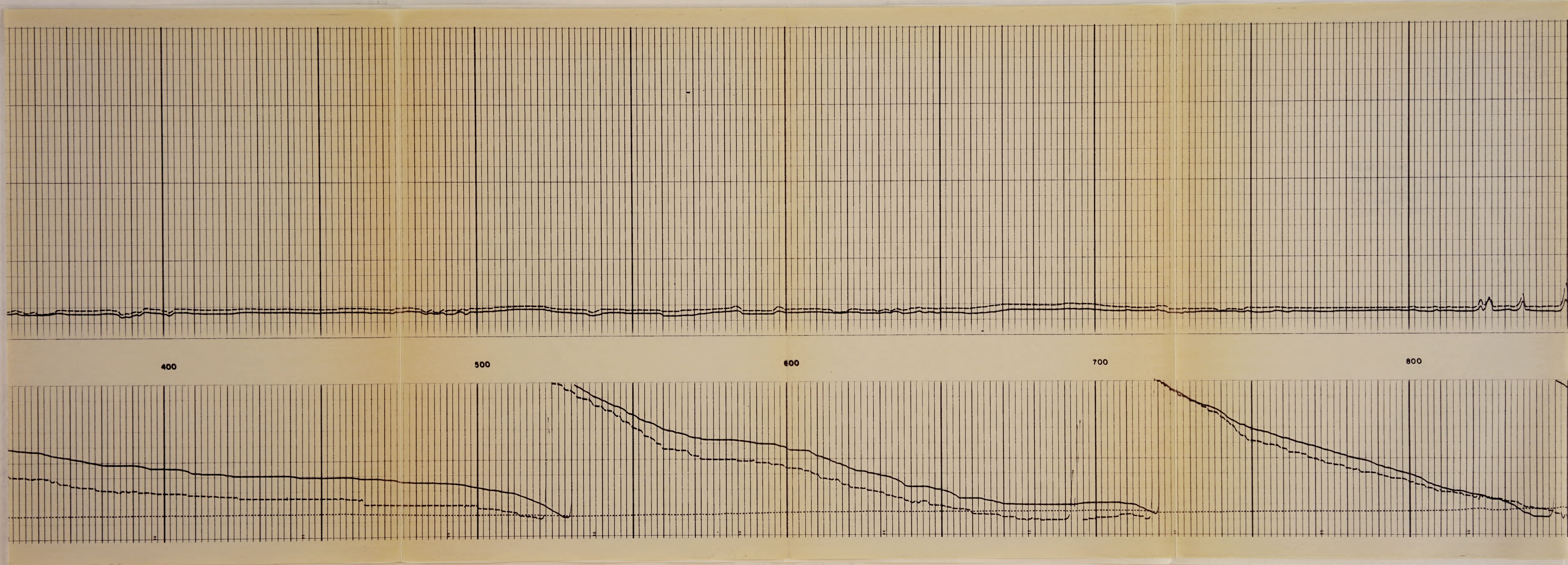


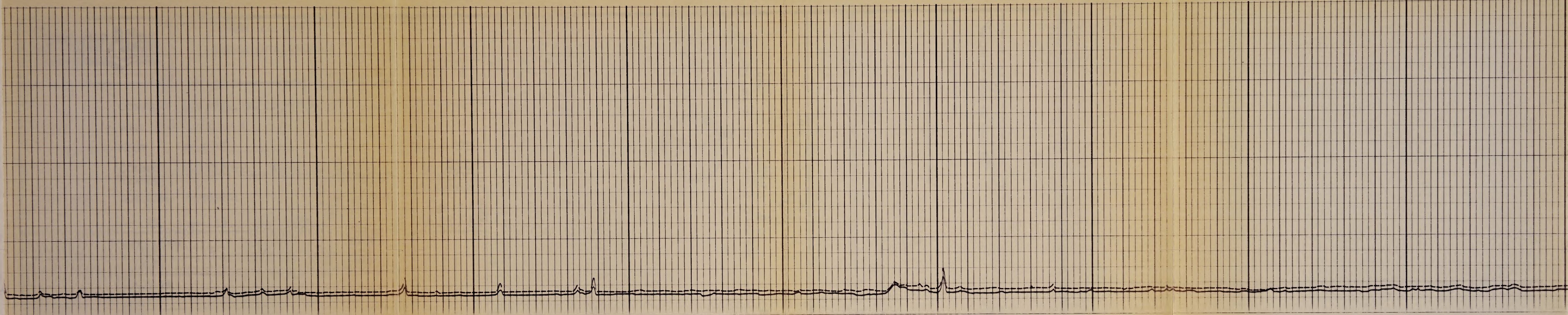
DEPTHS

200

300

DIAMETER OF HOLE IN INCHES
1 & 3
2 & 4





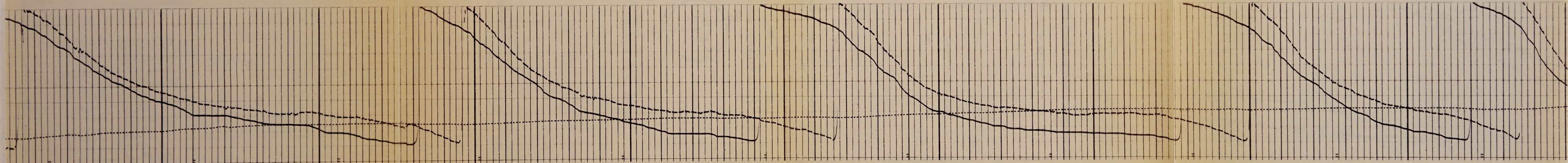
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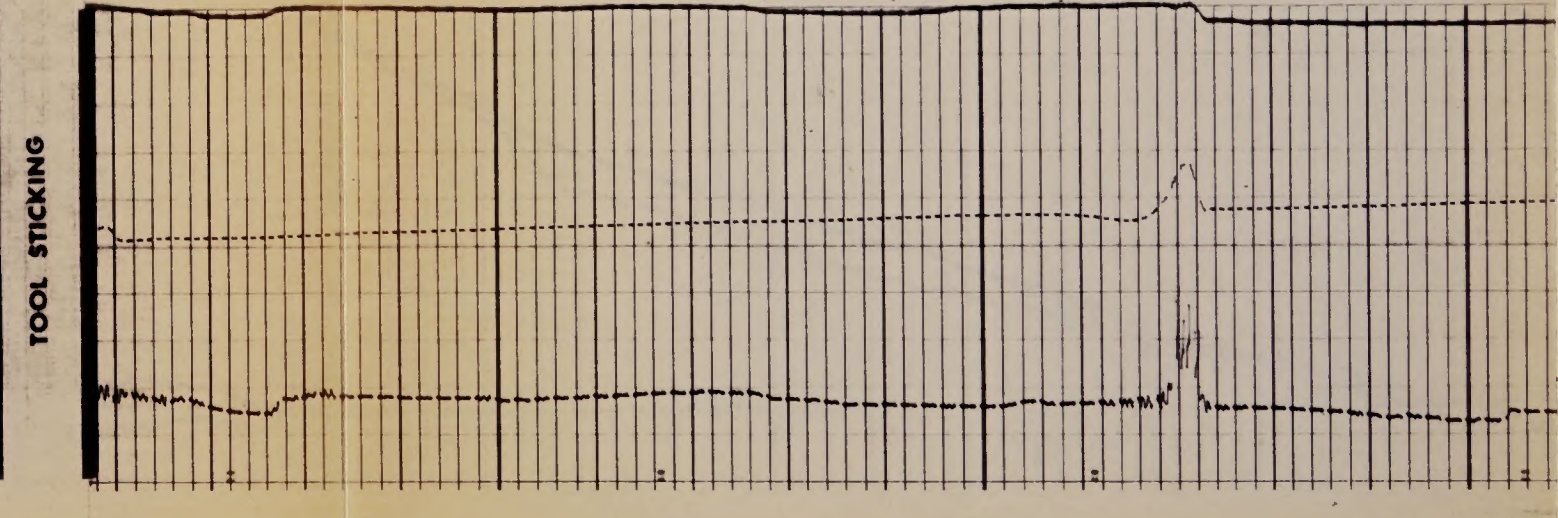
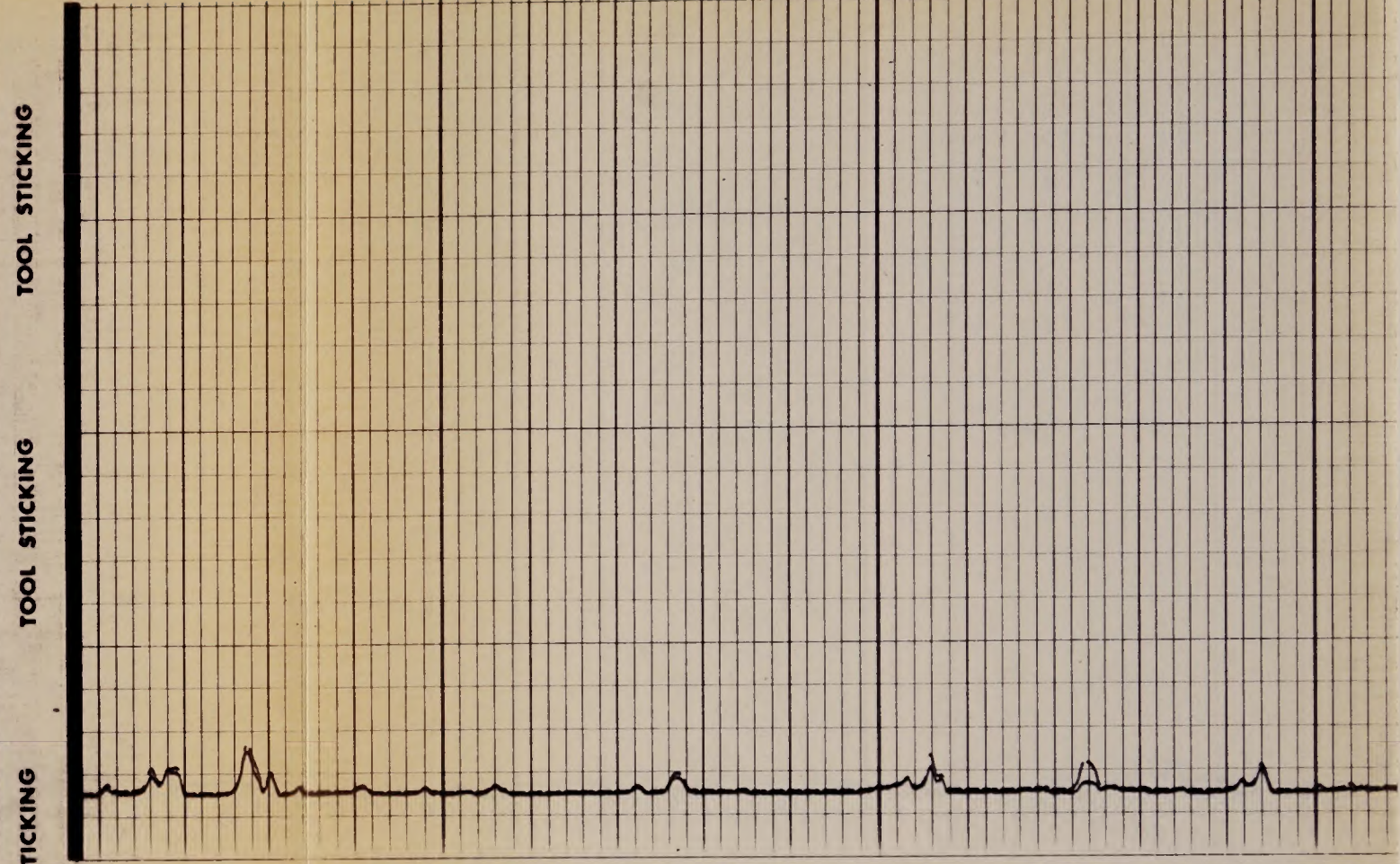
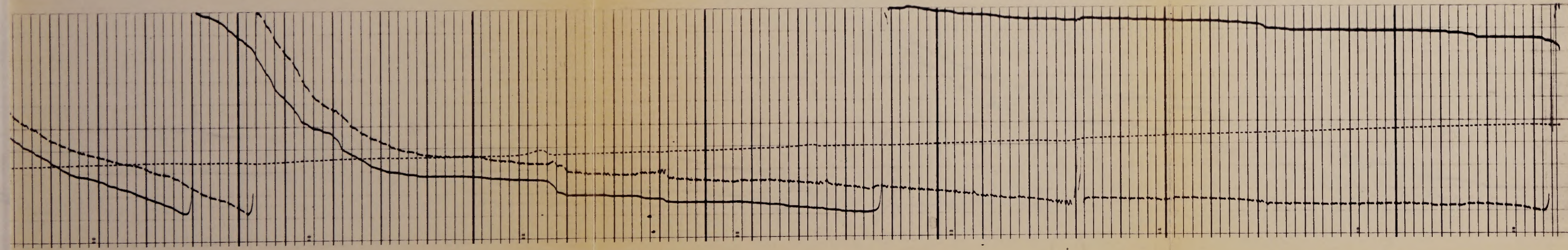
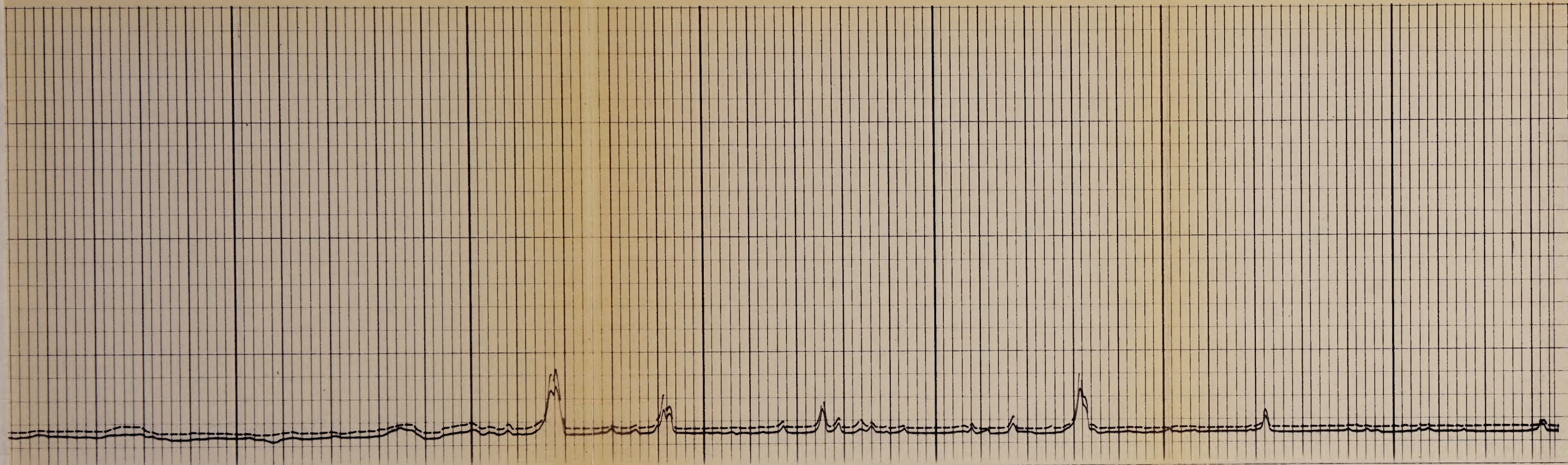
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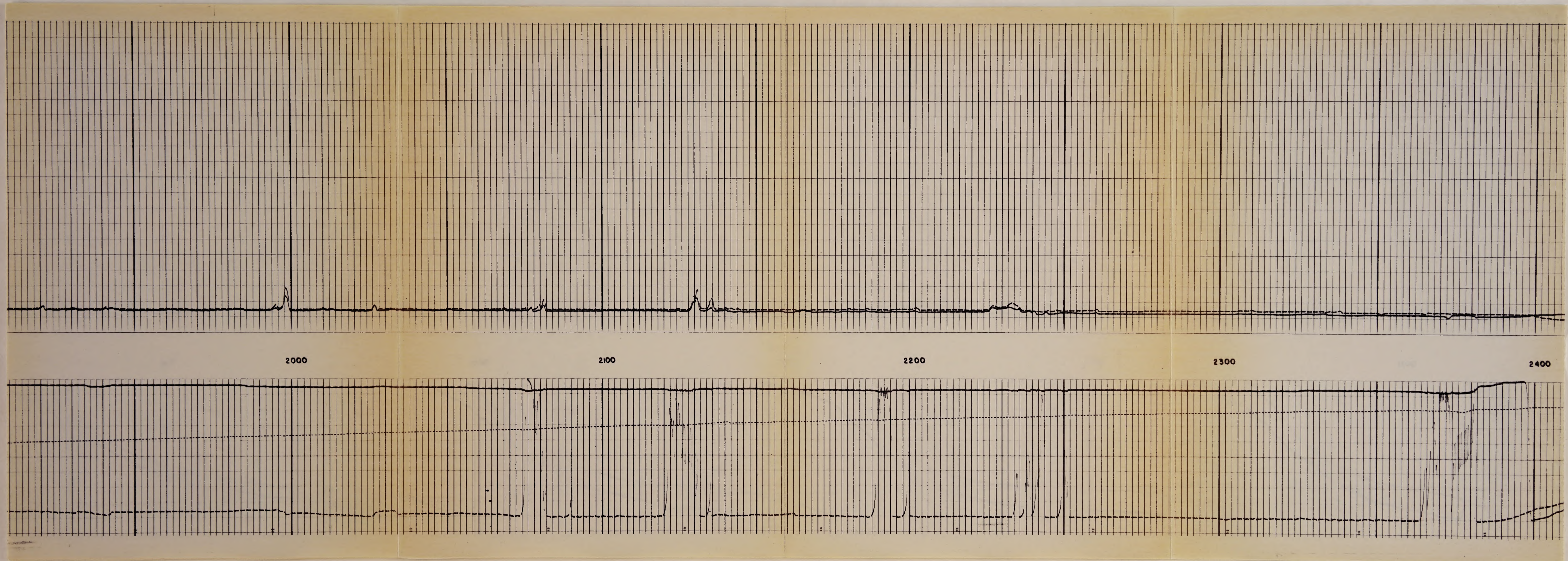
1100

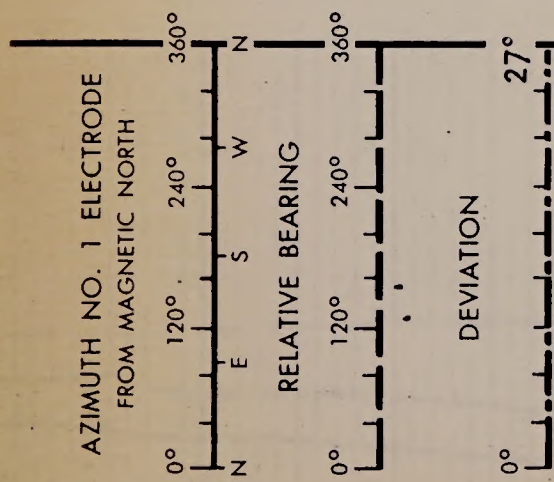
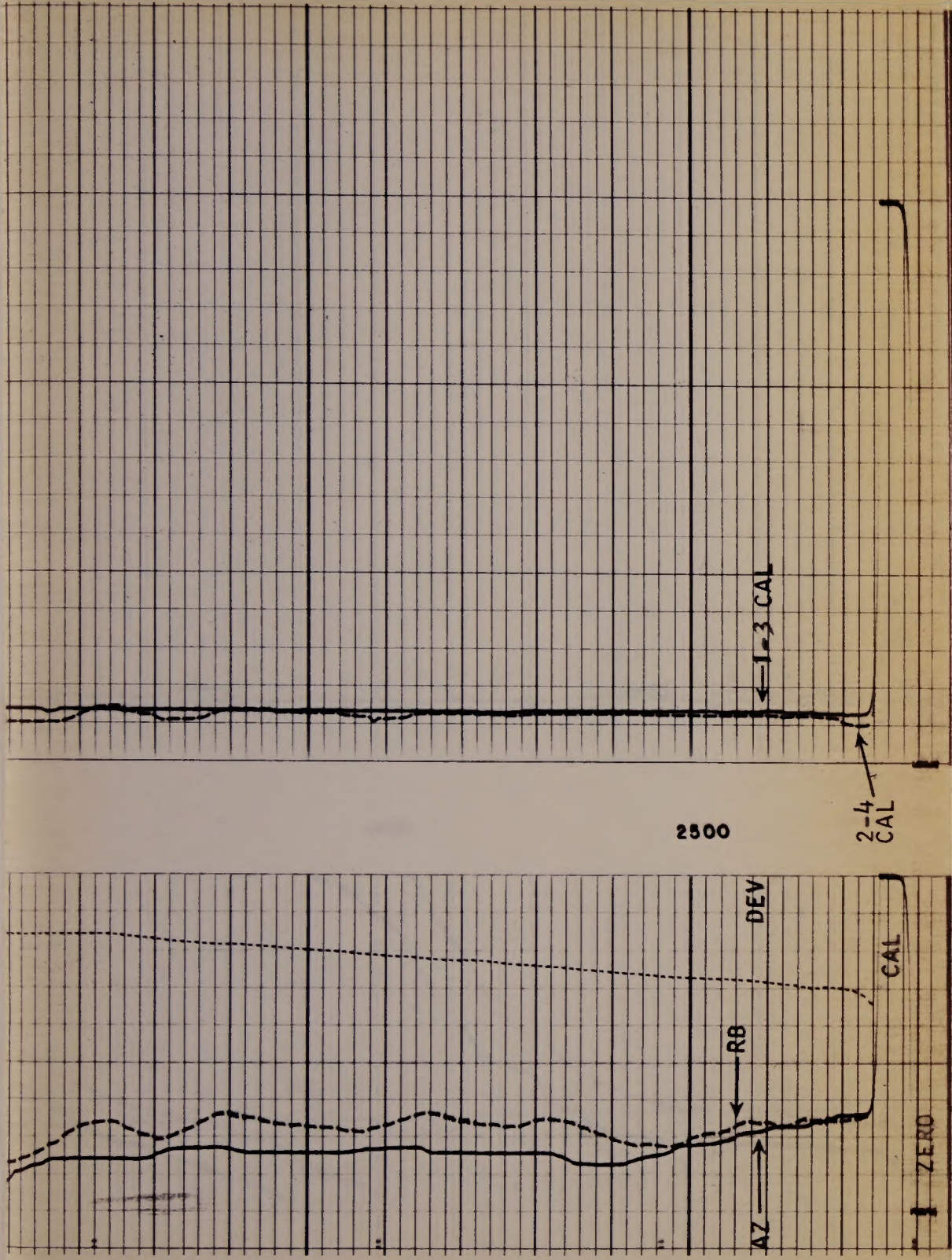
1200

1300









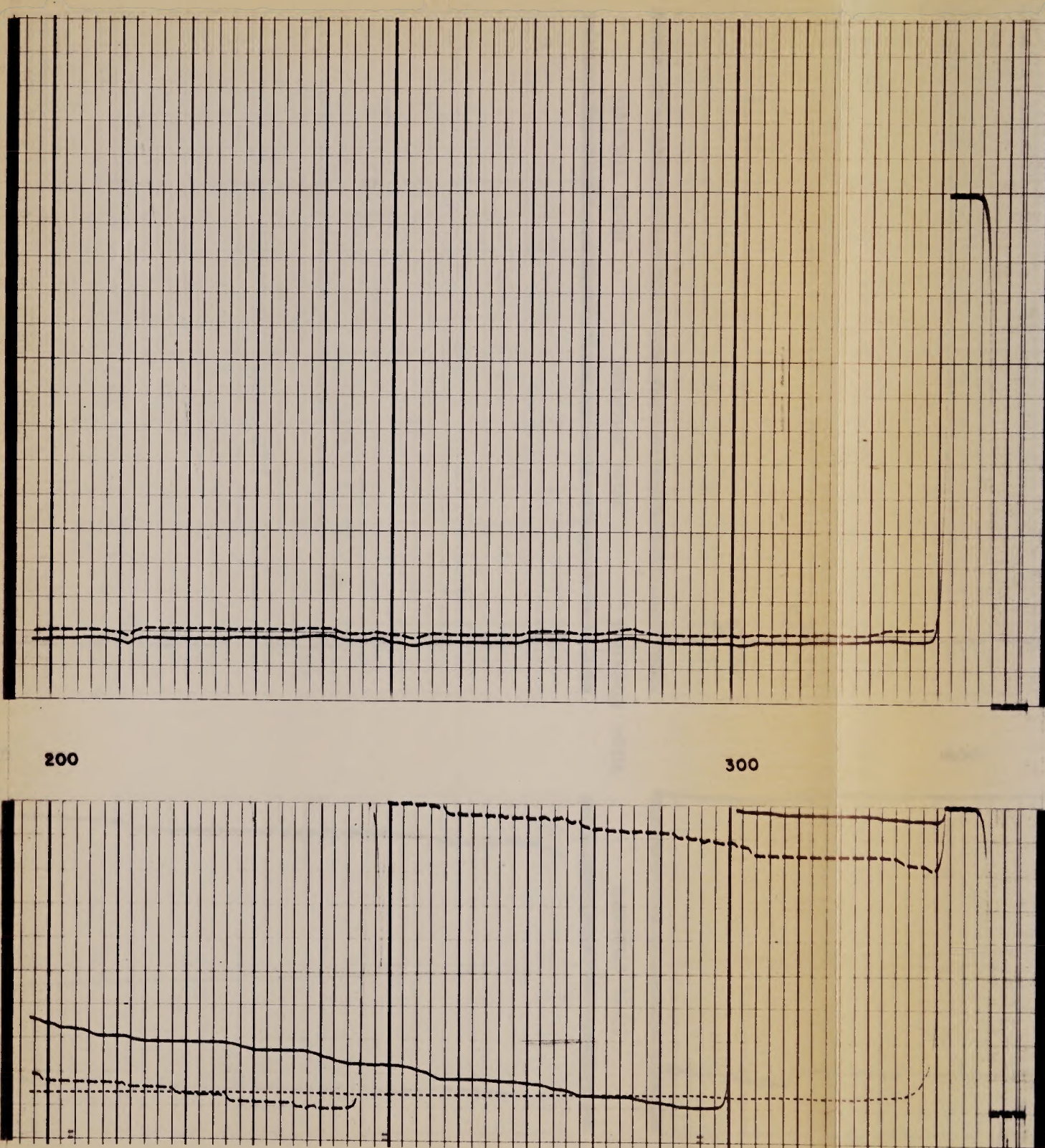
5" 15" 25" DIAMETER OF HOLE IN INCHES

DEPTH

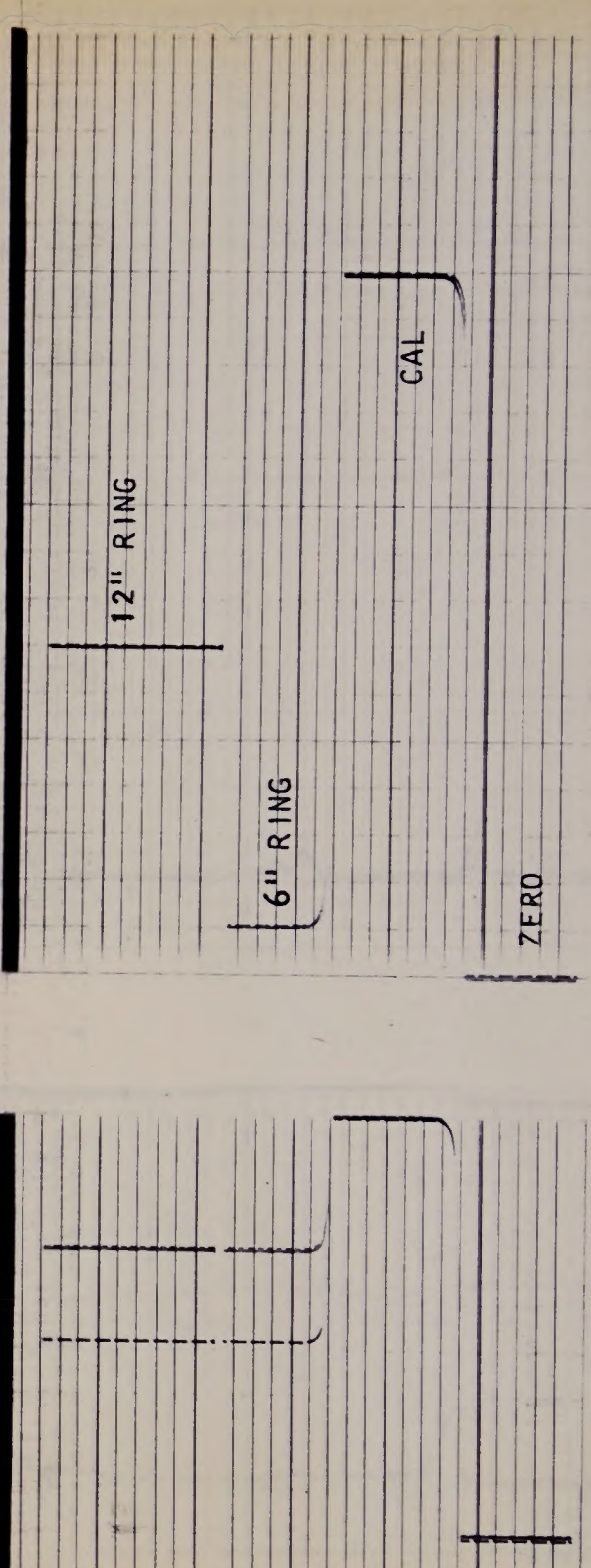
ORIENTATION

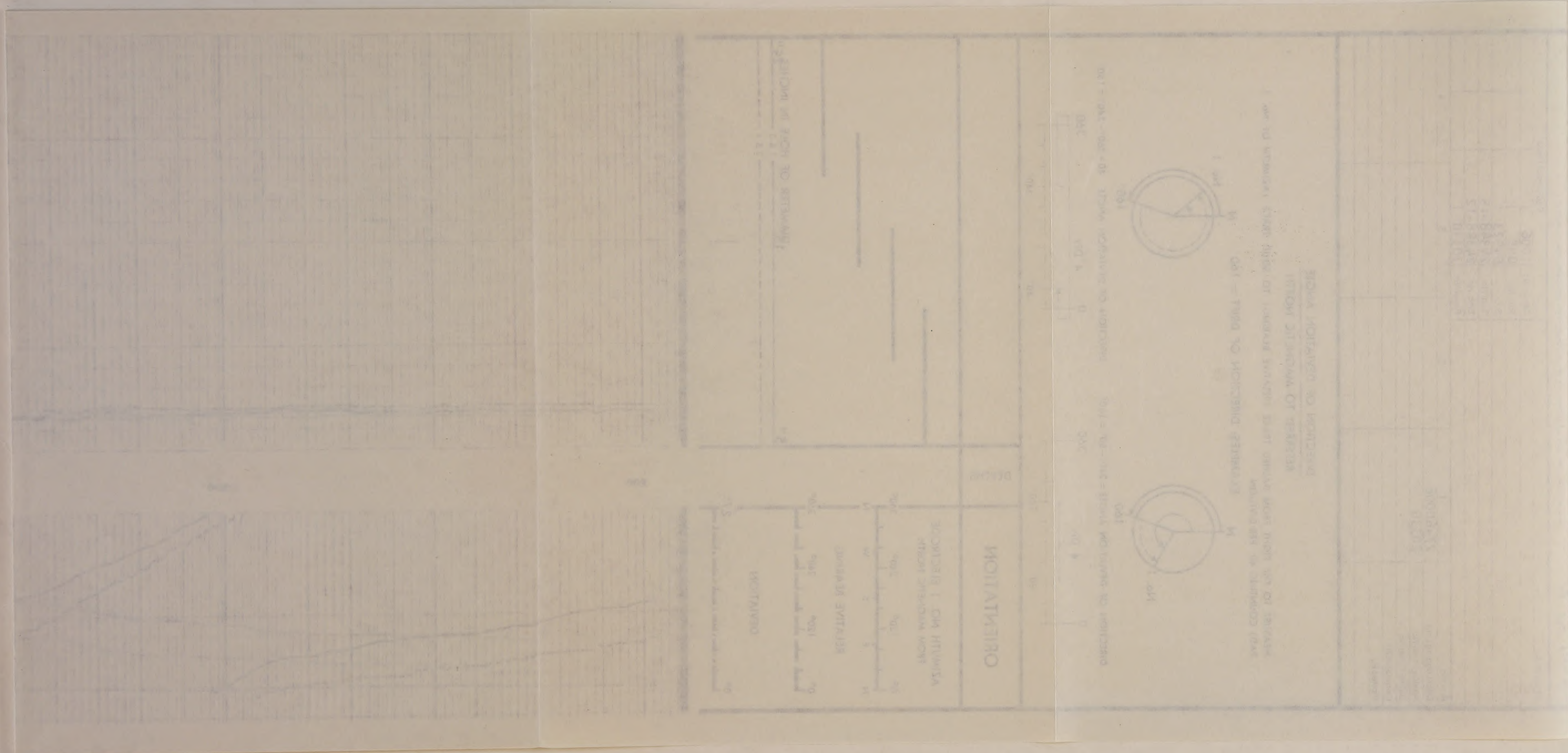
COMPANY ESI DRILLING CO. ROLL NO. _____
 WELL # 03 From _____ To _____
 FIELD WILDCAT
 COUNTY RIO BLANCO STATE COLORADO

REPEAT SECTION



CALIBRATION

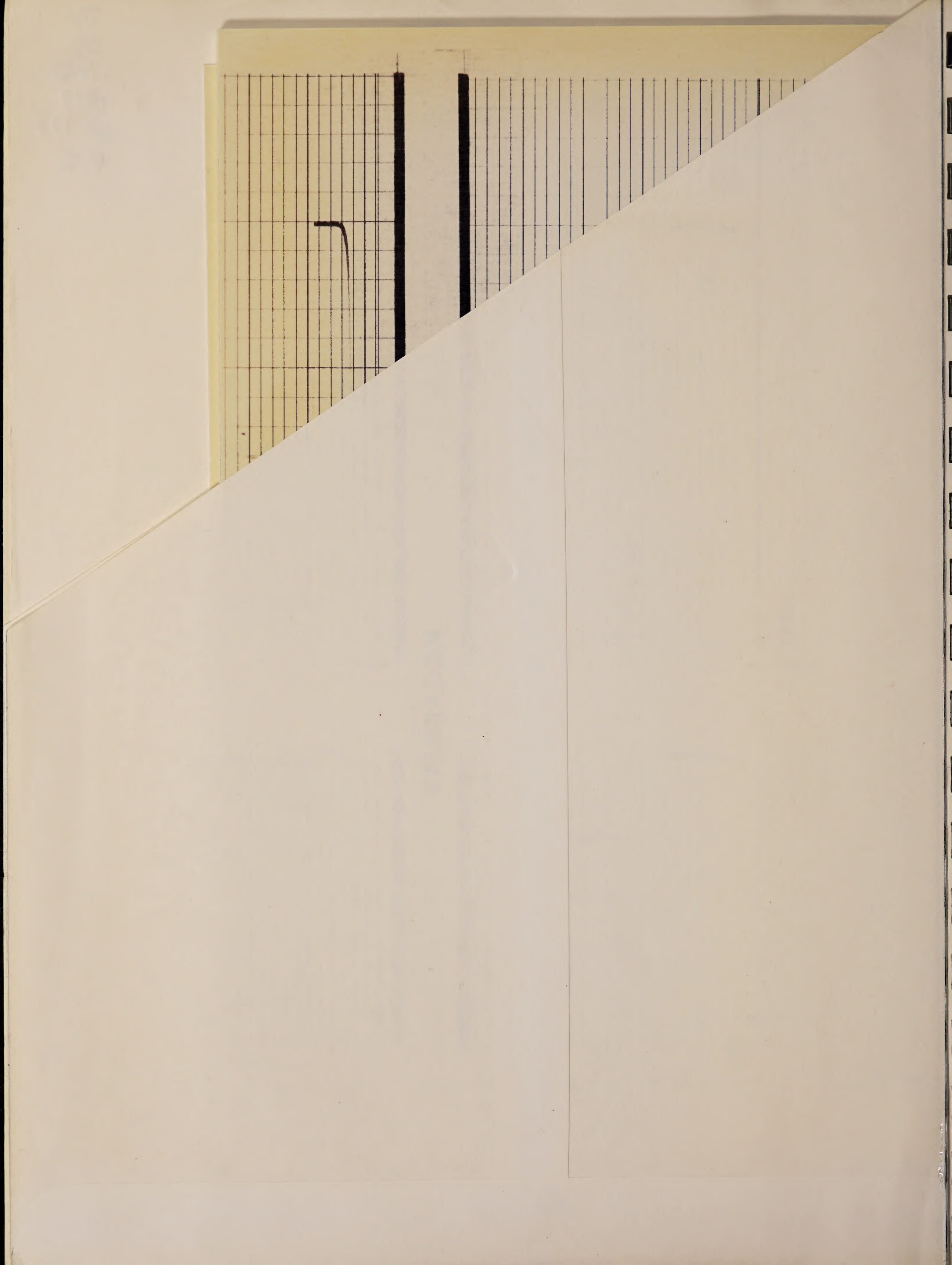




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COMPENSATED

Densilog



DresserAtlas

COMPENSATED

Densilog

FILE NO.

COMPANY ESI DRILLING CO.WELL PILOT HOLE "X"FIELD WILDCATCOUNTY RIO BLANCO STATE COLORADO

LOCATION:

420 E/WL 1650 N/SL
6 TH. P.M.SEC 29 TWP 1S RGE 97WOther Services
DIFL
DIFF. TEMP
DIR. SURVEY
4-ARM CAL.Permanent Datum GROUND LEVEL Elev. 6284
Log Measured from K.B. 4 Ft. Above Permanent Datum
Drilling Measured from K.B.Date 10-26-76
Run No. ONE
Depth—Driller 2531
Depth—Logger 2531
Bottom Logged Interval 2530
Top Logged Interval 158
Casing—Driller 8 5/8 @ 156 @ @
Casing—Logger 158
Bit Size 6 1/4
Type Fluid in Hole GELDensity and Viscosity 8.5+ 38
pH and Fluid Loss 8.5 6.0 cc cc cc
Source of Sample FLOWLINE
Rm @ Meas. Temp. .21 @ 48 °F @ °F @ °F @ °F
Rmf @ Meas. Temp. .18 @ 43 °F @ °F @ °F @ °F
Rmc @ Meas. Temp. .36 @ 50 °F @ °F @ °F @ °F
Source of Rmf and Rmc MEAS
Rm @ BHT .09 @ 113 °F @ °F @ °F @ °F
Time Since Circ. 14 HRS.
Max. Rec. Temp. Deg. F. 113 °F °F °F °F
Equip. No. and Location 6110 RS
Recorded By WHITE-MILHOAN
Witnessed By MR. SNOW

FOLD HERE

Remarks:

Equipment Used

Series No. 2208 ONE 2208
Run No. ONE 2208
S.O. 24923 24923
Tool No. 29226 31986
Elec. No. 29226 31986
Panel No. 33038 32564

Densilog

Equipment Data

Run No. ONE
Tool Model No. 2208
Serial No. 29226
Diam. 3
Computer Model No. 3457
Serial No. 33038
Source Model No. 33038
Serial No. 33038

Gamma Ray

Run No. ONE
Tool Model No. 1305
Serial No. 31984
Diam. 3 5/8
Detect. Model No. D6G4
Type SC INT.
Length 6"
Dist. to Source 12'

General

Hoist Truck No. 6110
Auxiliary Equipment

Computer Data

Logging Data

Densilog

Correction Scale

Density Scale

T.C. Sec.

Porosity Scale Data

Gamma Ray

Sens. Settings

Zero Div. L or R

API G.R. Units/Div.

Run No. 1
From 2530
To 158
REC. 2
514
0
15GAMMA RAY
& CALIPER

DEPTH

BULK DENSITY
GRAMS/CC

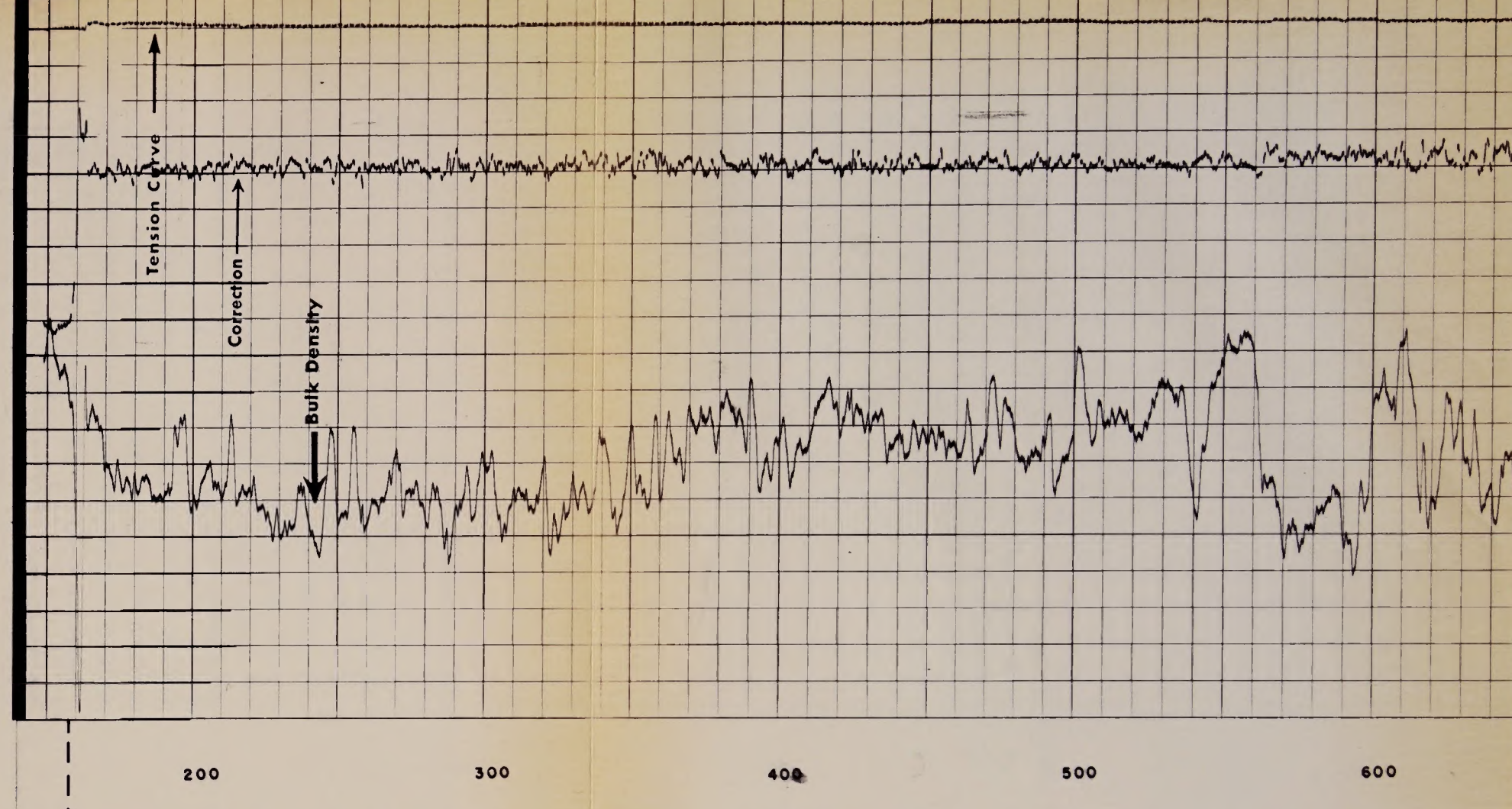
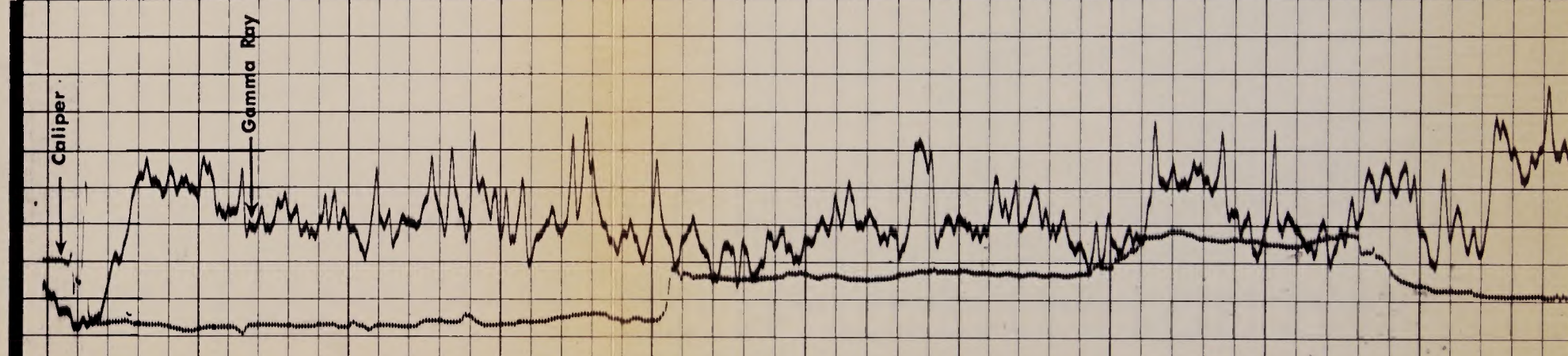
0 API UNITS 200

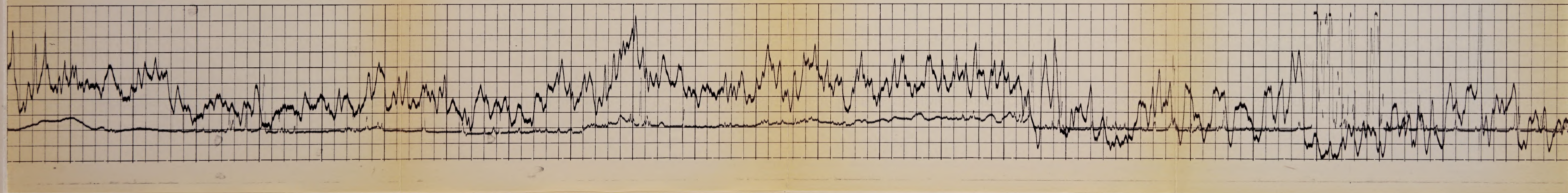
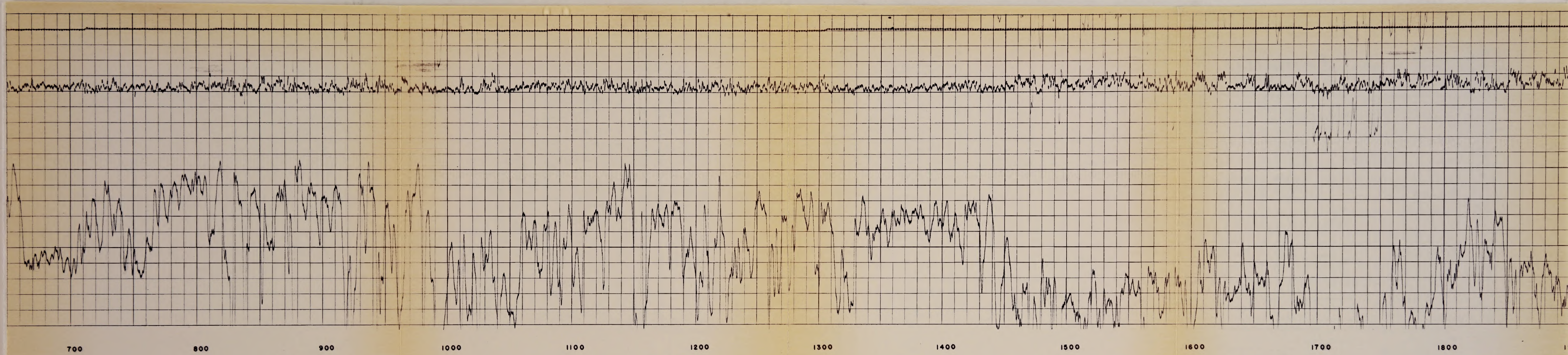
5 HOLE SIZE - INCHES 15

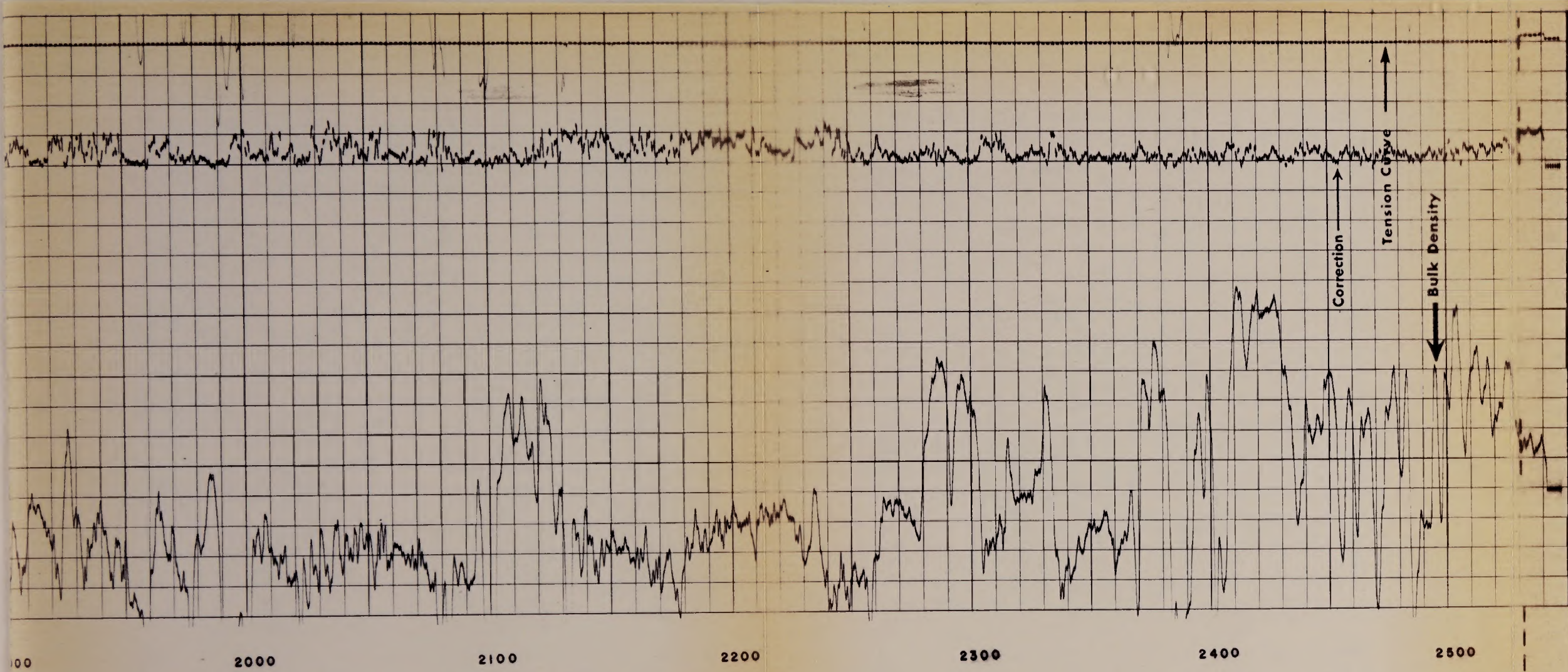
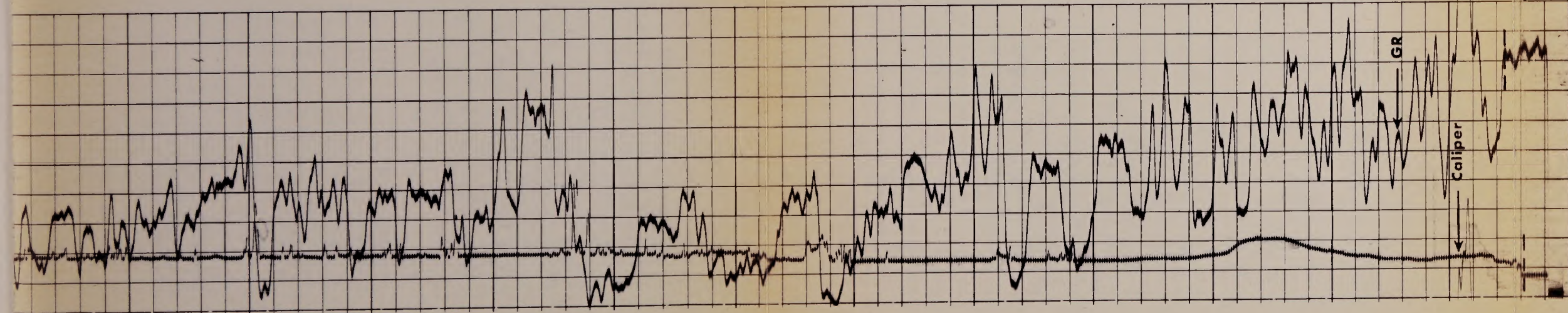
CORRECTION

-1.5 0 +1.5

2.0 2.5 3.0

500#/C.D.
TENSION





5
HOLE SIZE - INCHES
15

0
API UNITS
200

GAMMA RAY
& CALIPER

DEPTH

BULK DENSITY
GRAMS/CC

500#/C.D.
TENSION
CORRECTION
-0.5
0
+0.5
2.0
2.5
3.0

Company ESI DRILLING CO.
Well # 03
Field WILDCAT
County RIO BLANCO
State COLORADO

Drillers T.D. 2531
Log F.R. 2530
Log T.D.
Elevations:
K.B. 6288 D.F. G.L. 6284

5
HOLE SIZE - INCHES
15

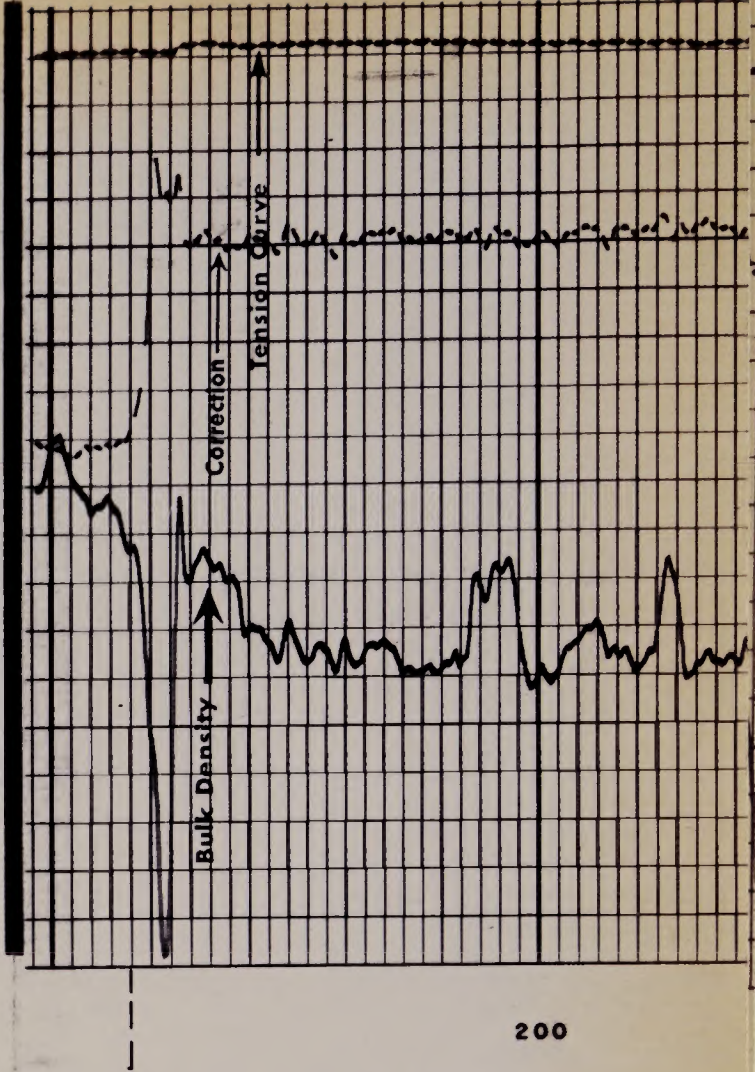
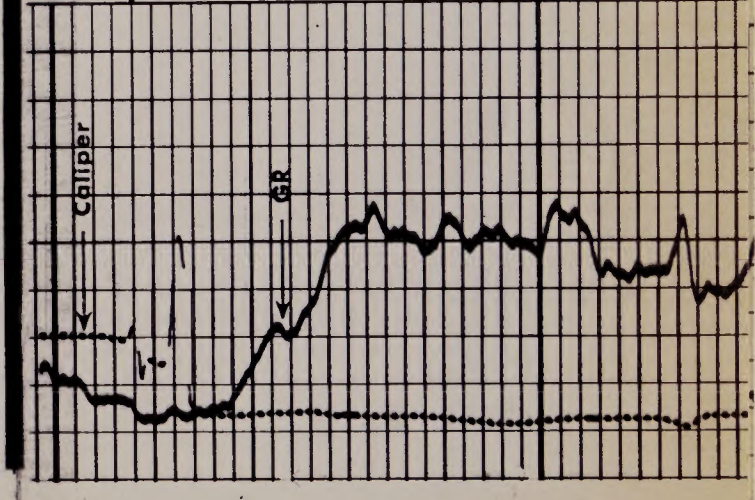
0
API UNITS
200

GAMMA RAY
& CALIPER

DEPTH

BULK DENSITY
GRAMS/CC

500#/C.D.
TENSION
CORRECTION
-0.5
0
+0.5
2.0
2.5
3.0





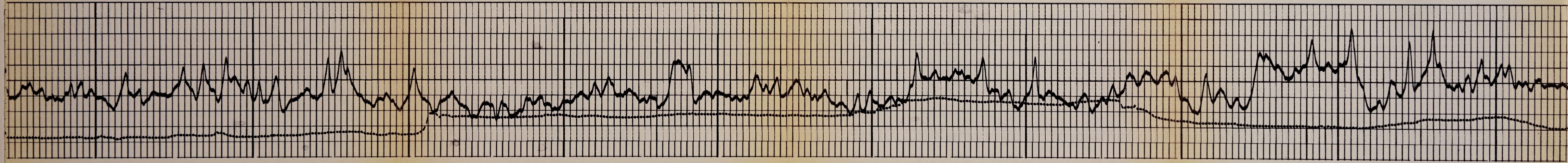
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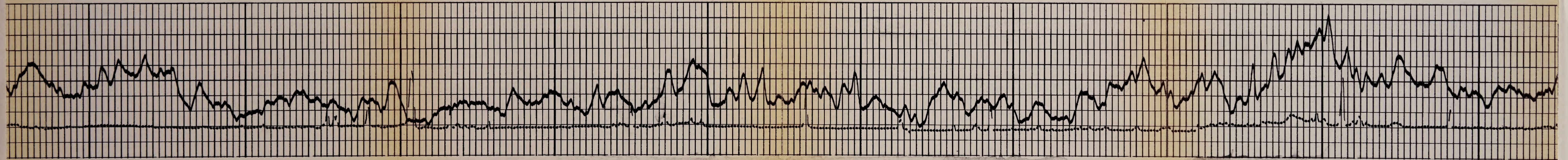
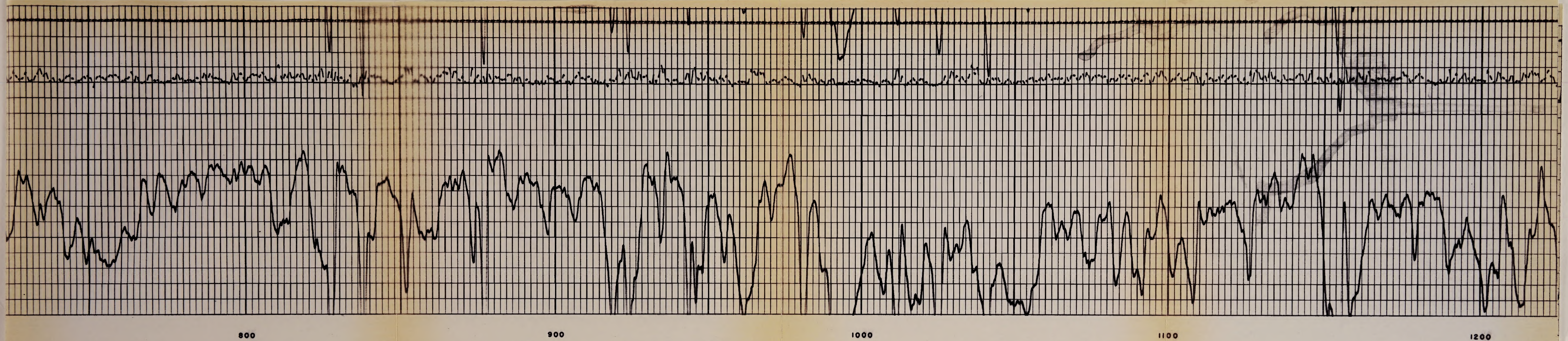
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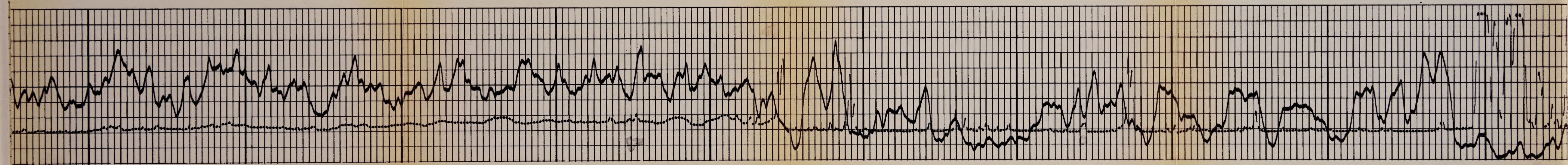
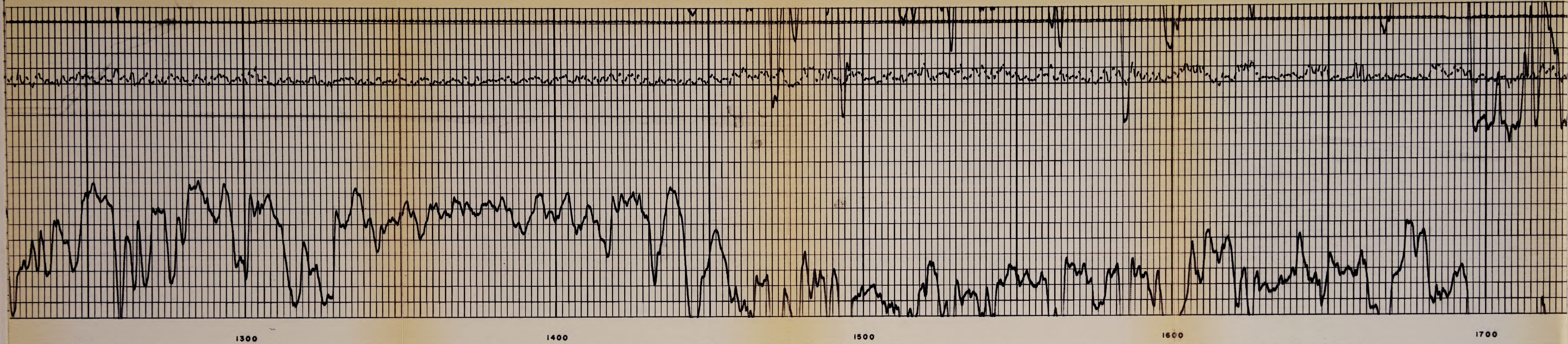
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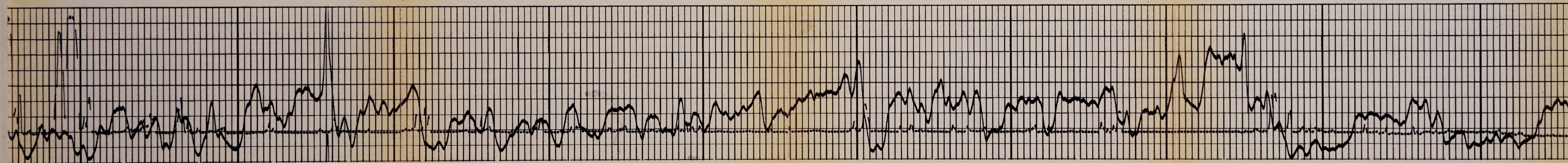
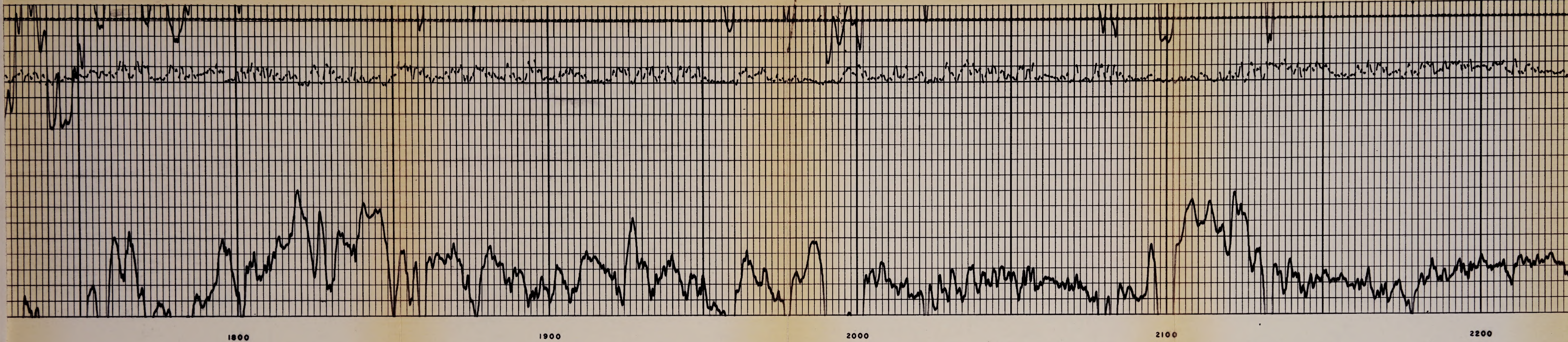
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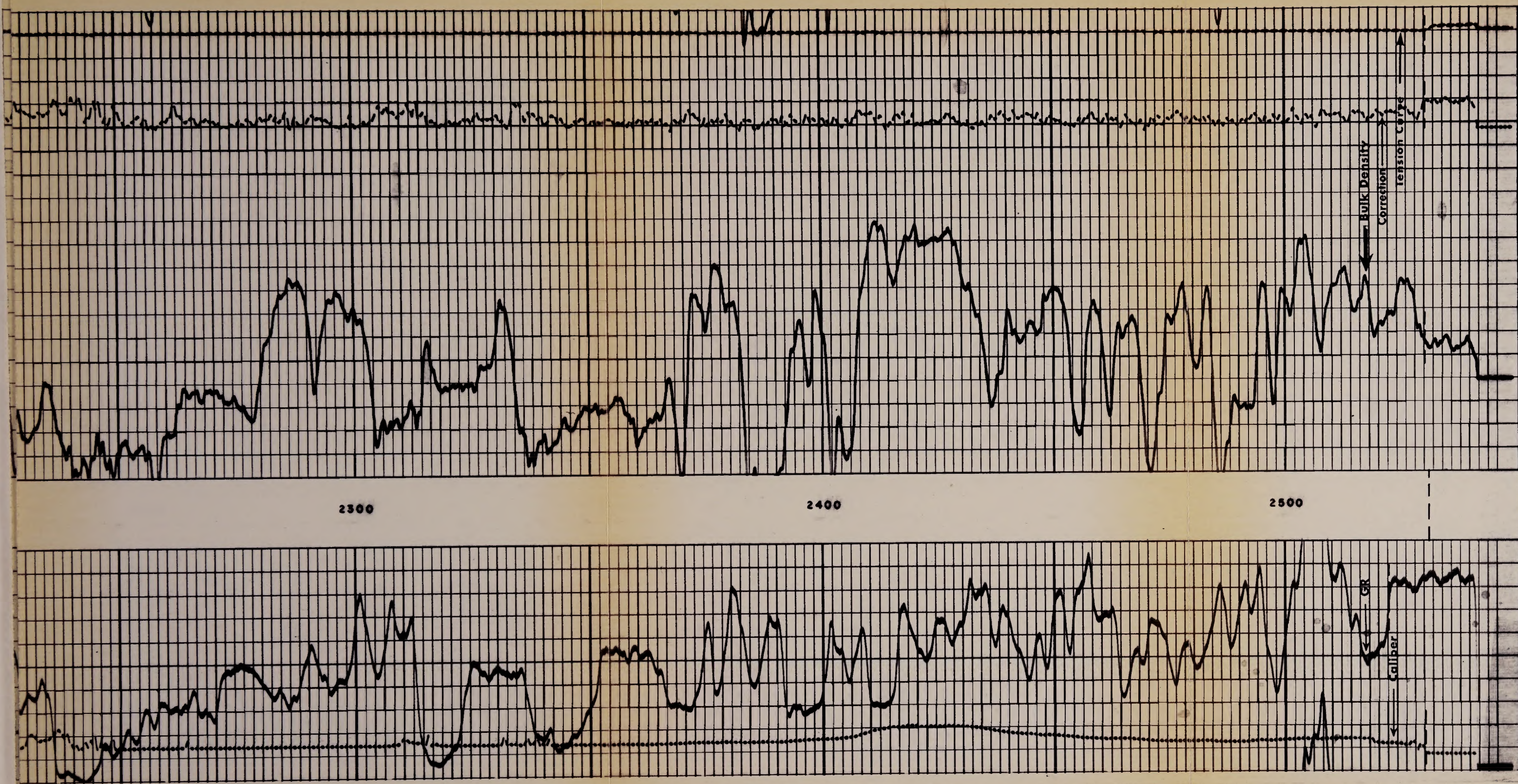
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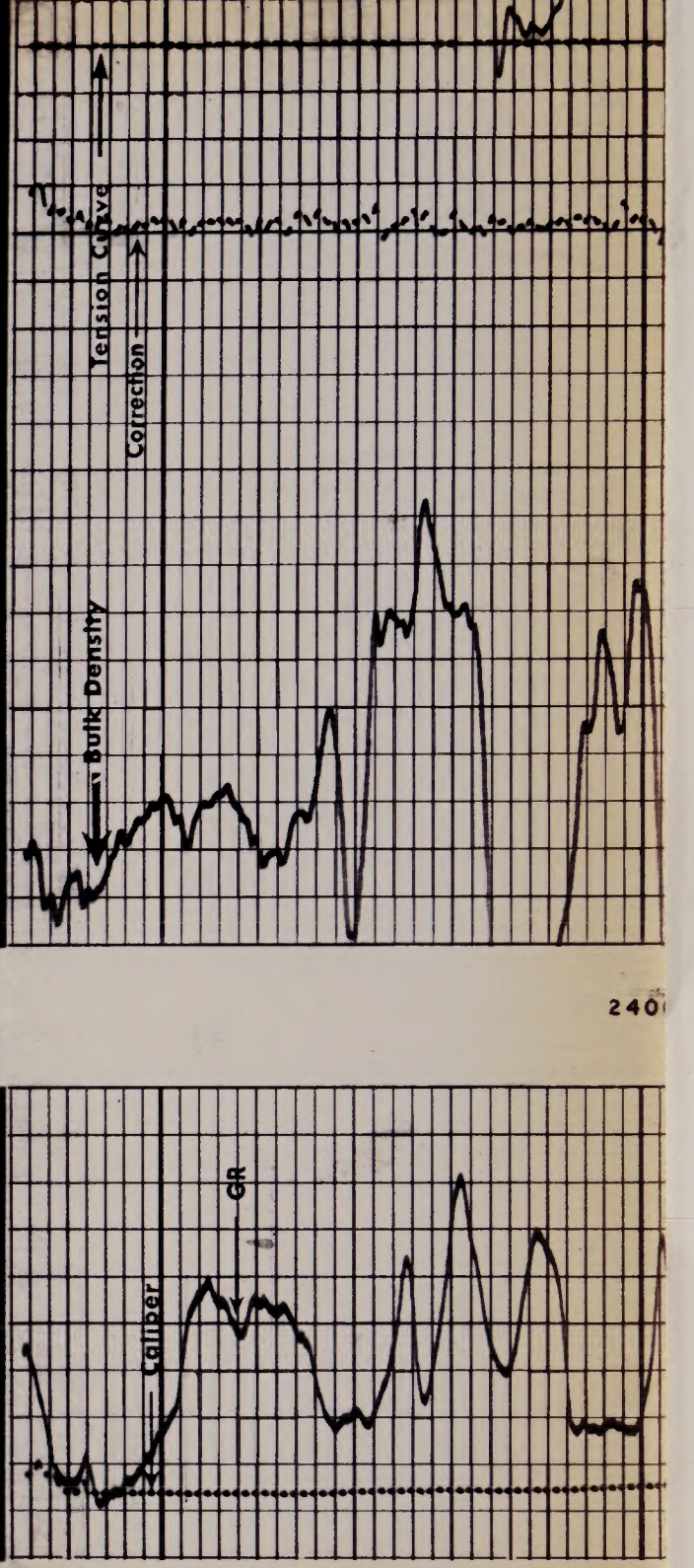


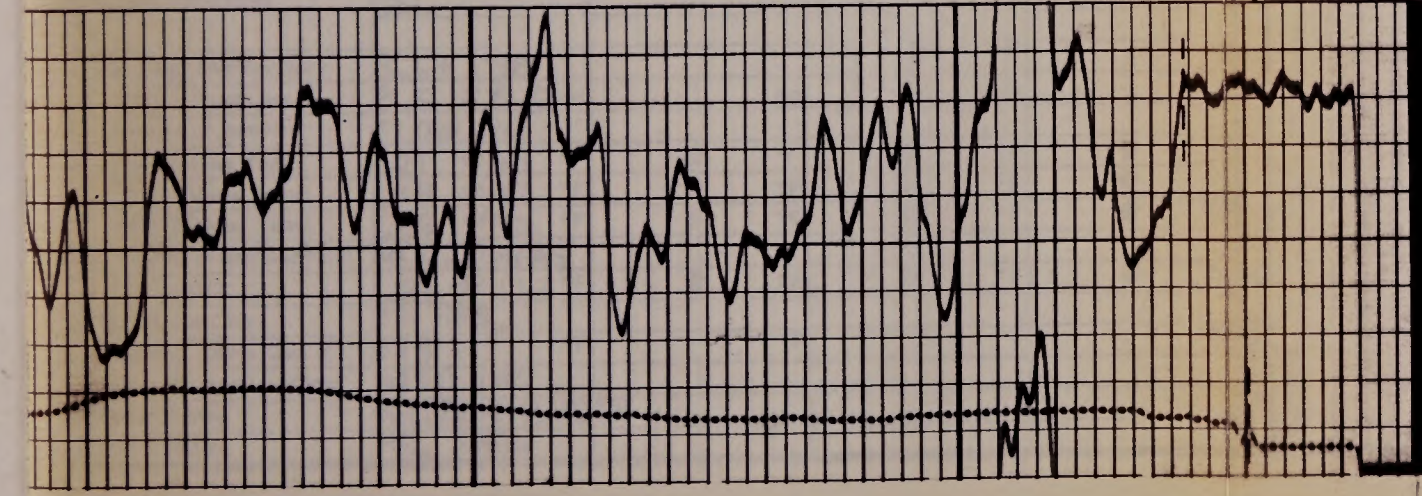




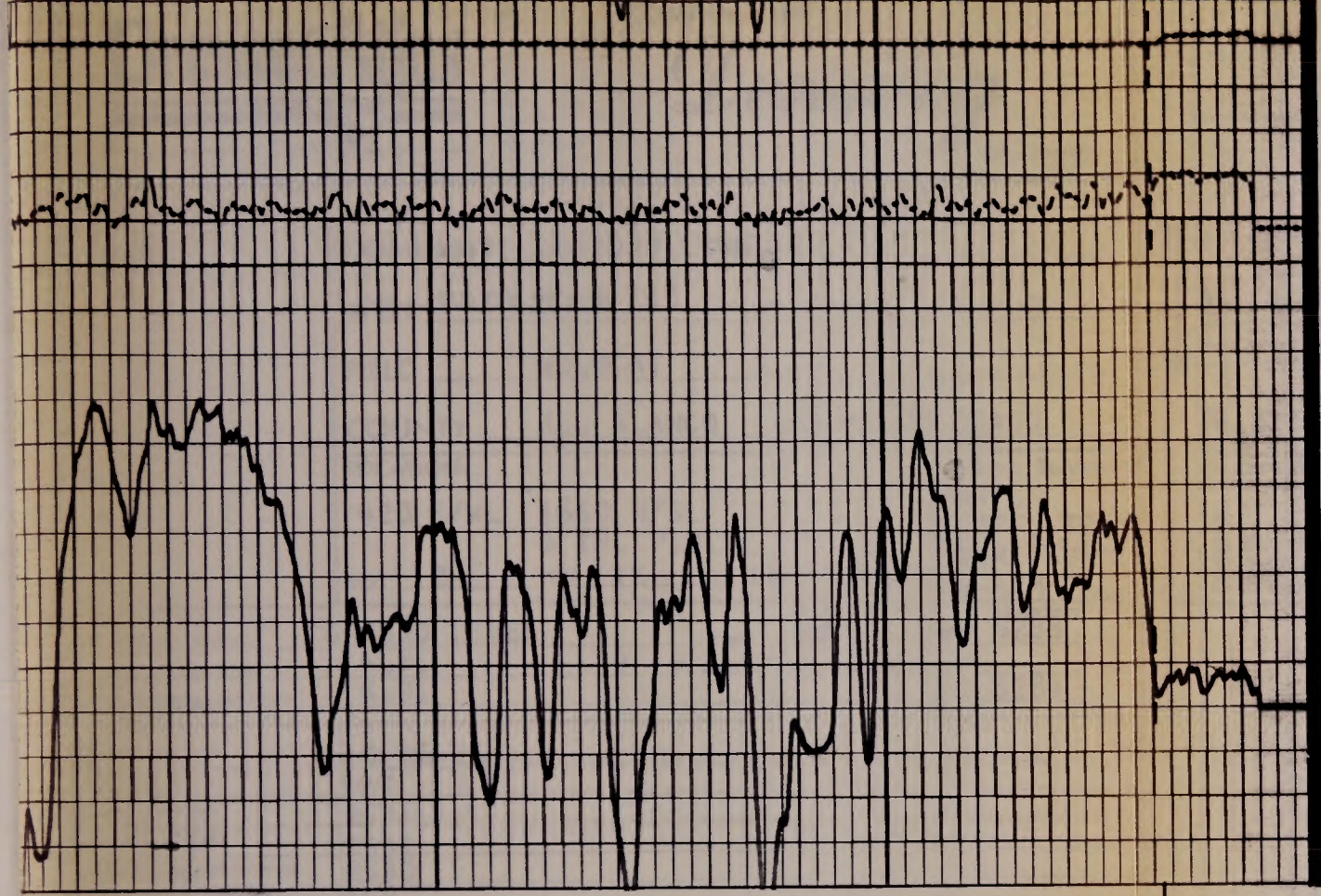
500#/C.D. TENSION		BULK DENSITY GRAMS/CC	
2.0 2.5 3.0		-0.5 0 +0.5	
HOLE SIZE - INCHES		DEPTH	
5 15		0 200	
API UNITS			
Company ESI DRILLING CO.		Drillers T.D. 2531	
Well # 03		Log F.R. 2530	
Field WILDCAT		Log T.D. 2531	
County RIO BLANCO		Elevations:	
State COLORADO		K.B. 6288 D.F. G.L. 6284	

REPEAT SECTION

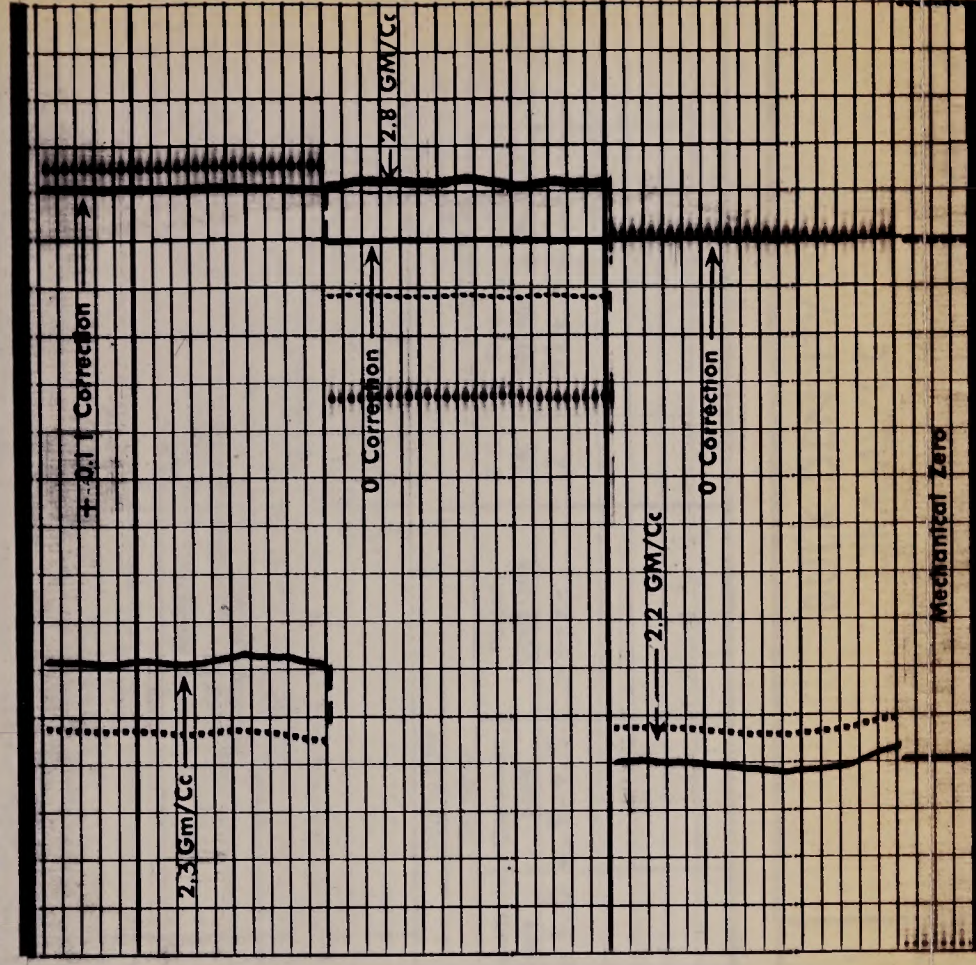
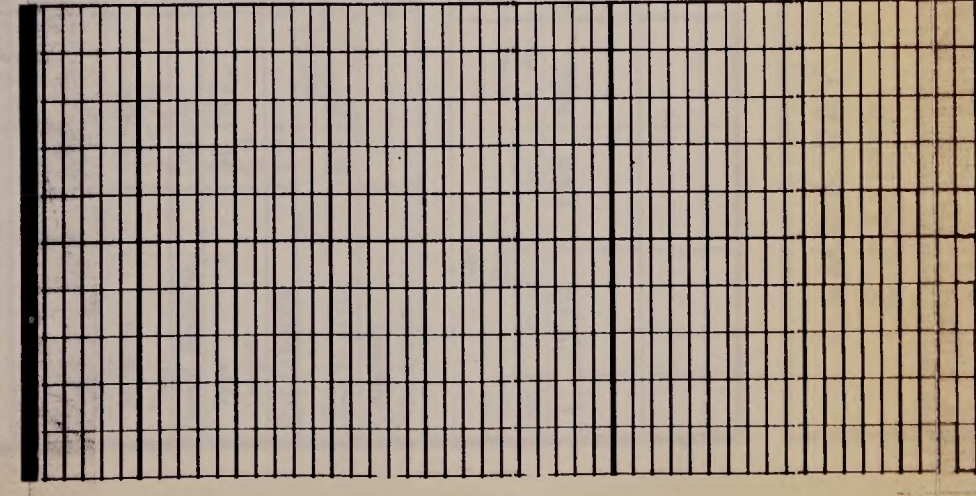




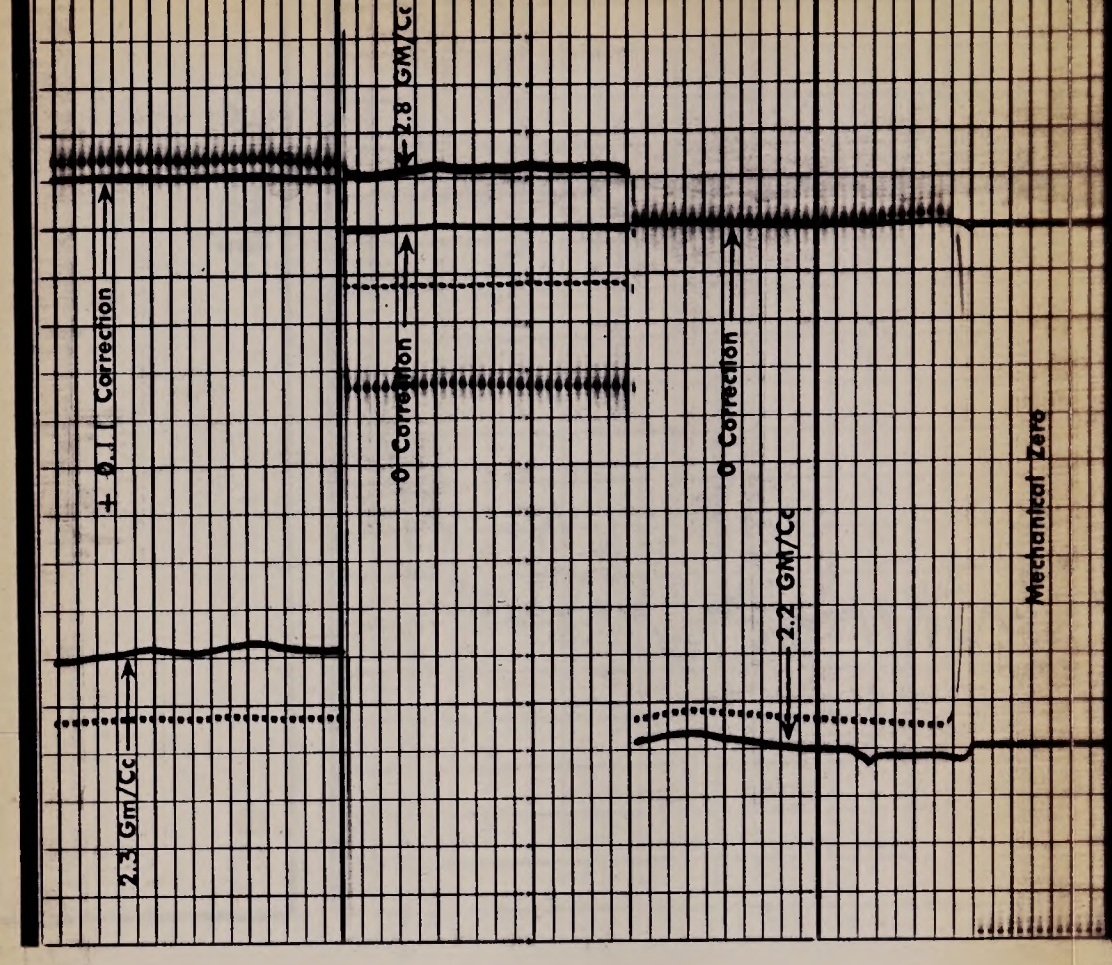
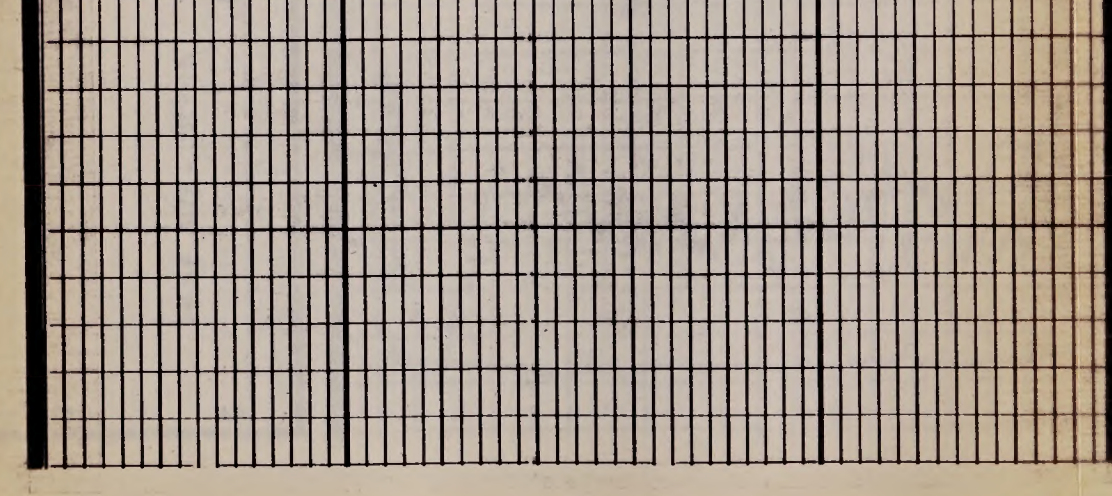
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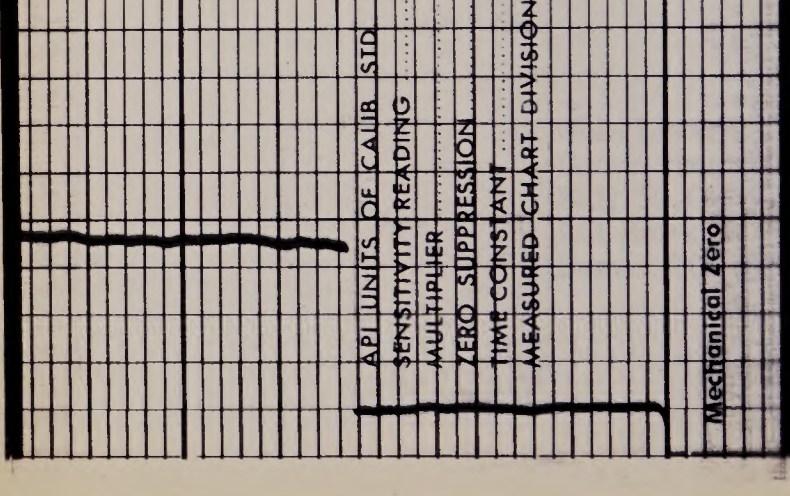
CALIBRATION — AFTER SURVEY



CALIBRATION — BEFORE SURVEY



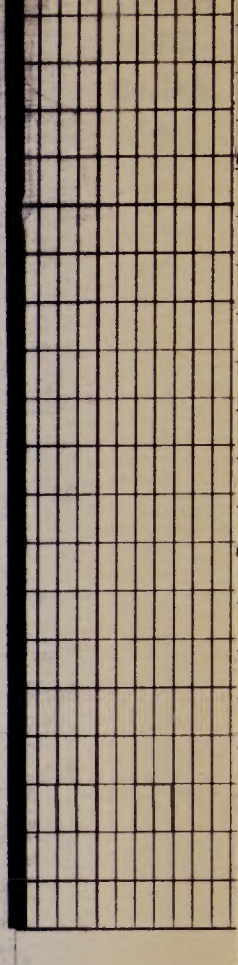
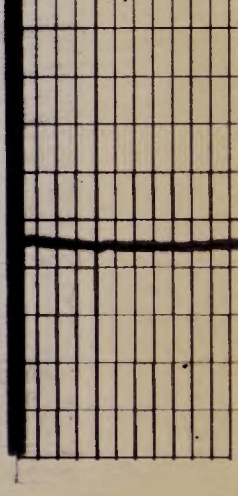
G/R LOG CALIBRATION
AFTER LOG



API UNITS OF CALIB STD
SENSITIVITY READING 185
MULTIPLIER 200
ZERO SUPPRESSION X1
TIME CONSTANT 0
MEASURED CHART DIVISIONS 3.6

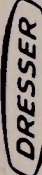
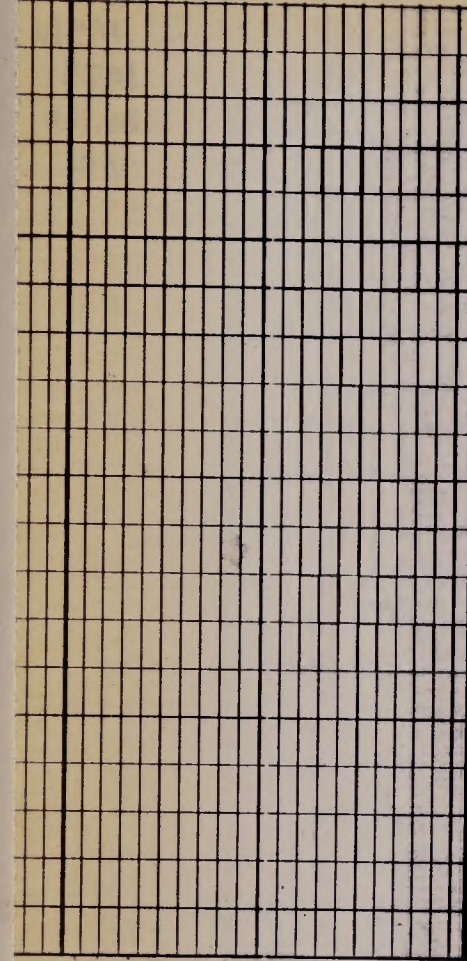
Mechanical Zero

G/R LOG CALIBRATION
BEFORE LOG

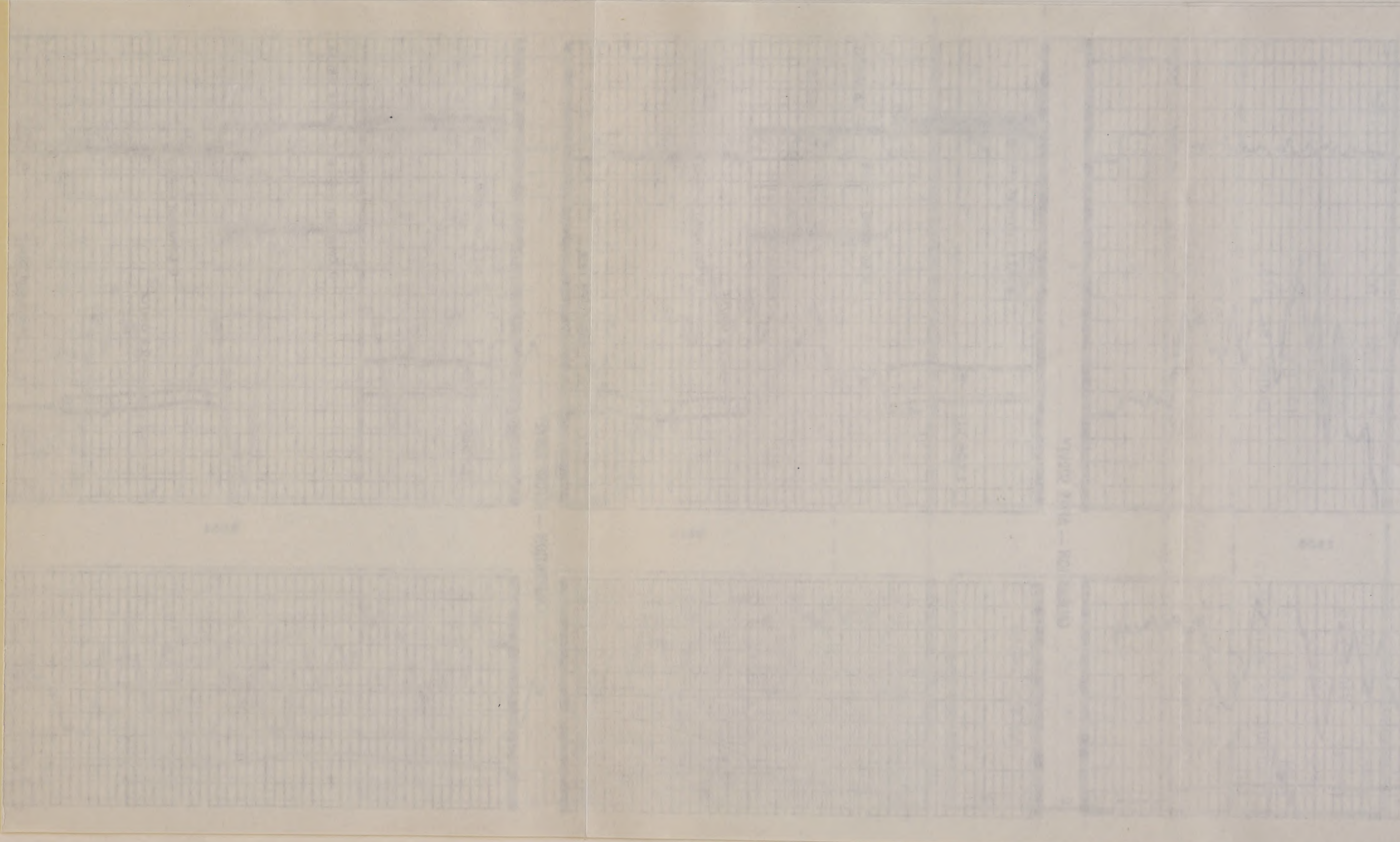


API UNITS OF CALIB STD	185
SENSITIVITY READING	200
MULTIPLIER	X1
ZERO SUPPRESSION	0
TIME CONSTANT	3
MEASURED CHART DIVISIONS	3.6

Mechanical Zero



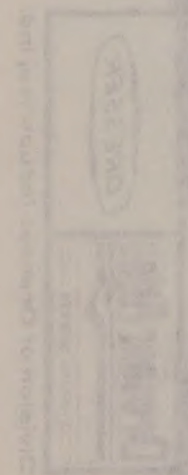
Division of Dresser Industries, Inc.



#4971221

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Atlas

Differential

Dual Induction Focused Log

CORRELATION LOG

WELL NO.

COMPANY EST. DALLAS CO.

WELL PROD. HOLE 7 1/2"

7181 HOLE

PROD. HOLE 7 1/2"

COUNTY AIS 7 1/2" STATE

STATE

WELL 6 1/2" 6 1/2" HOLE

6 1/2" 6 1/2" HOLE

WELL 6 1/2" 6 1/2" HOLE

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WELL 6 1/2" 6 1/2" HOLE

Dual Induction Focused Log

FILE NO.	COMPANY <u>ESI DRILLING CO.</u>										
TIGHT HOLE	WELL <u>PILOT HOLE "X"</u>										
	FIELD <u>WILDCAT</u>										
	COUNTY <u>RIO BLANCO</u>					STATE <u>COLORADO</u>					
	LOCATION: <u>420 E/WL 1650 N/SL</u> <u>6 TH. P. M.</u> SEC <u>29</u> TWP <u>1S</u> RGE <u>97W</u>								Other Services DIFF. TEMP CDL-GR DIR. SURVE <u>4-ARM CAL</u>		
Permanent Datum <u>GROUND LEVEL</u> Elev. <u>6284</u>										KB <u>6288</u>	
Log Measured from <u>K.B.</u> <u>4</u> Ft. Above Permanent Datum										DF <u>6284</u>	
Drilling Measured from <u>K.B.</u>										GL <u>6284</u>	
Date	<u>10-26-76</u>										
Run No.	<u>ONE</u>										
Depth--Driller	<u>2531</u>										
Depth--Logger	<u>2531</u>										
Bottom Logged Interval	<u>2529</u>										
Top Logged Interval	<u>158</u>										
Casing--Driller	<u>8 5/8@ 156</u>		<u>@</u>		<u>@</u>		<u>@</u>		<u>@</u>		
Casing--Logger	<u>158</u>										
Bit Size	<u>6 1/4</u>										
Type Fluid in Hole	<u>GEL</u>										
	<u>@</u>		<u>@</u>		<u>@</u>		<u>@</u>		<u>@</u>		
Density and Viscosity	<u>8.5+ 38</u>										
pH and Fluid Loss	<u>8.5+ 6.0 cc</u>				<u>cc</u>		<u>cc</u>		<u>cc</u>		
Source of Sample	<u>FLOWLINE</u>										
Rm @ Meas. Temp.	<u>.21 @ 48 °F</u>		<u>@</u>		<u>°F</u>		<u>@</u>		<u>°F</u>		
Rmf @ Meas. Temp.	<u>.18 @ 43 °F</u>		<u>@</u>		<u>°F</u>		<u>@</u>		<u>°F</u>		
Rmc @ Meas. Temp.	<u>.36 @ 50 °F</u>		<u>@</u>		<u>°F</u>		<u>@</u>		<u>°F</u>		
Source of Rmf and Rmc	<u>MEAS. MEAS.</u>										
Rm @ BHT	<u>.09 @ 113 °F</u>		<u>@</u>		<u>°F</u>		<u>@</u>		<u>°F</u>		
Time Since Circ.	<u>11 HRS.</u>										
Max Rec. Temp. Deg. F.	<u>113 °F</u>				<u>°F</u>		<u>°F</u>		<u>°F</u>		
Equip. No. and Location	<u>6110 RS</u>										
Recorded By	<u>WHITE-MILHOAN</u>										
Witnessed By	<u>MR. SNOW</u>										

1 - 1
TOLD HERE

REMARKS

REMARKS					Equipment Used							
					Series No.	11503		1305				
					Run No.	ONE		ONE				
					S. O.	54923		54923				
					Tool No.	33297		31984				
					Elec. No.	33297		31984				
					Panel No.	33793		32564				
					C.S.	160		----				
Changes in Mud Type or Additional Samples												
Date	Sample No.				Type Log	Depth	Scale Up Hole	Scale Down Hole				
Depth-Driller												
Type Fluid in Hole												
Dens.	Visc.											
pH	Fluid Loss			CC								
Source of Sample							Equipment Data					
Rm @ Meas. Temp.	@ °F	@	@	° F	Run No.	Tool Type	Pad Type	Tool Position	Other			
Rmf @ Meas. Temp.	@ °F	@	@	° F	ONE	DIFL-GR	----	1.5" S.O.				
Rmc @ Meas. Temp.	@ °F	@	@	° F								
Source Rmf Rmc												
Rm @ BHT	@ °F	@	@	° F								
Rmf @ BHT	@ °F	@	@	° F								
Rmc @ BHT	@ °F	@	@	° F								

CONDUCTIVITY
Millimhos/m

Millimhos/m

RESISTIVITY
Ohms m²/m $\text{Ohms m}^2/\text{m}$

DEPTH

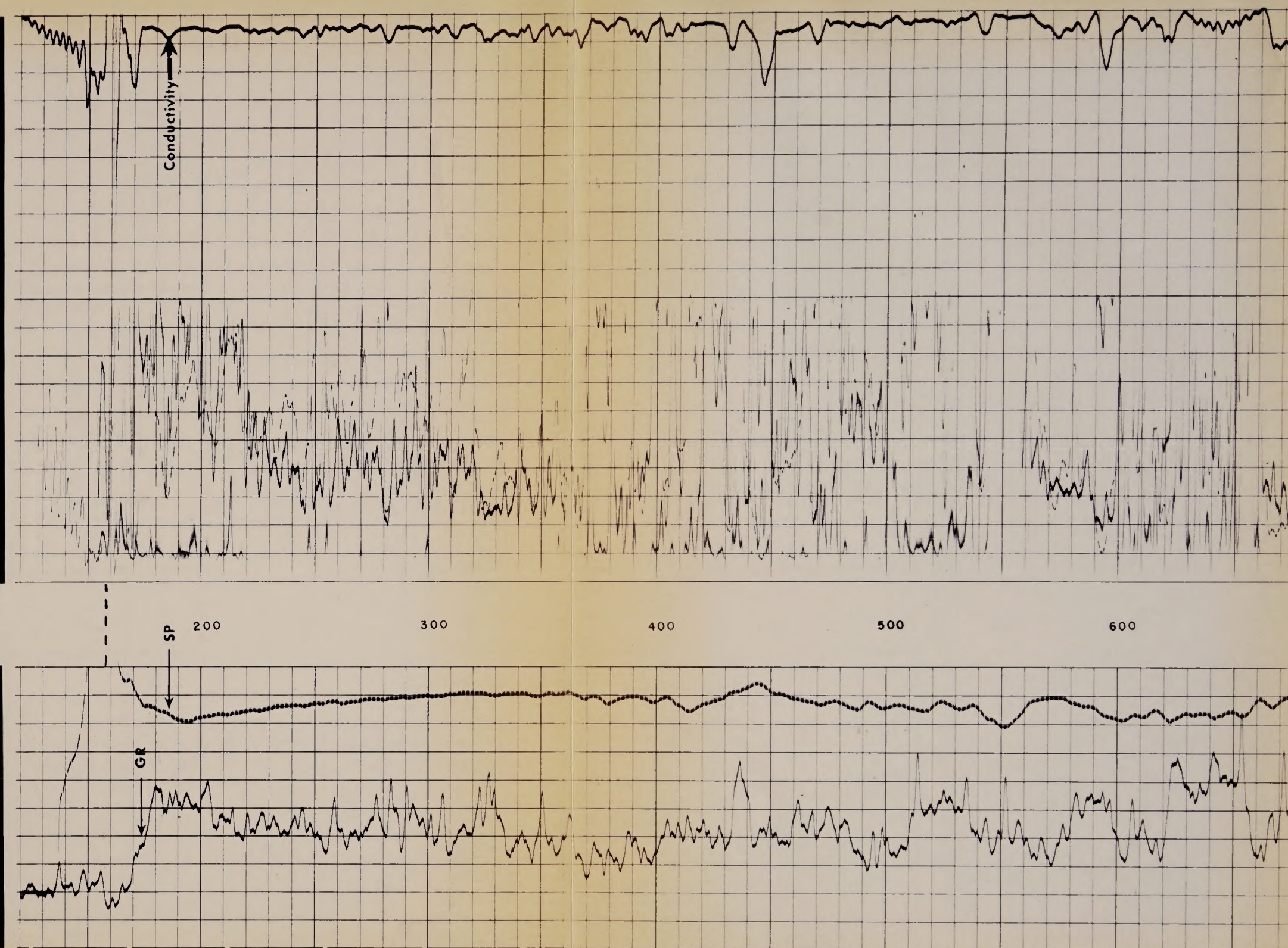
SPONTANEOUS POTENTIAL
Millivolts

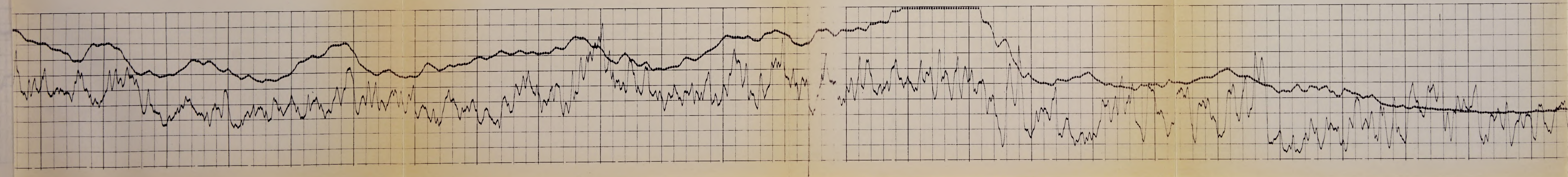
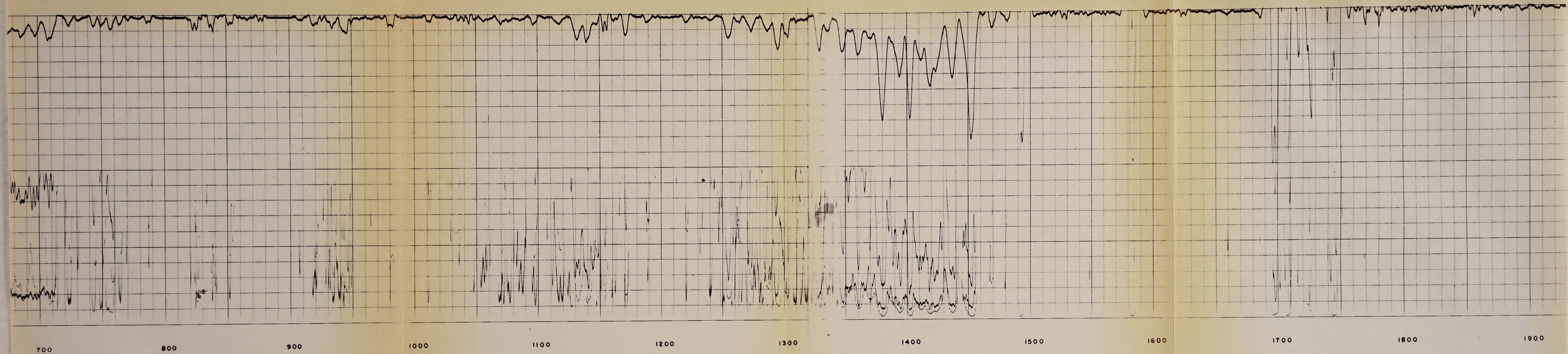
Millivolts

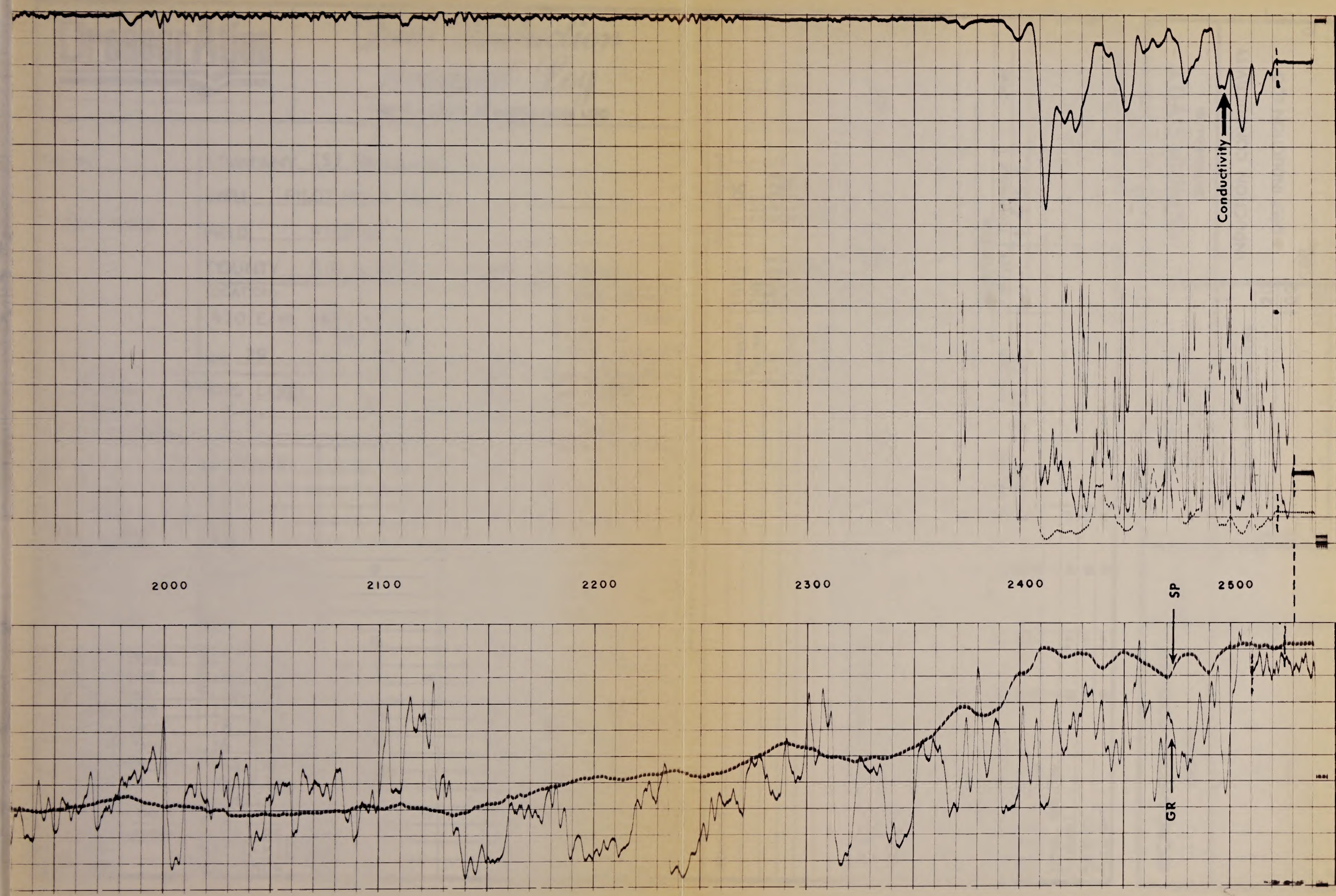
INDUCTION CONDUCTIVITY
DEEP INDUCTION LOG

SHALLOW FOCUSED LOG	
0	20
0	100
0	1000

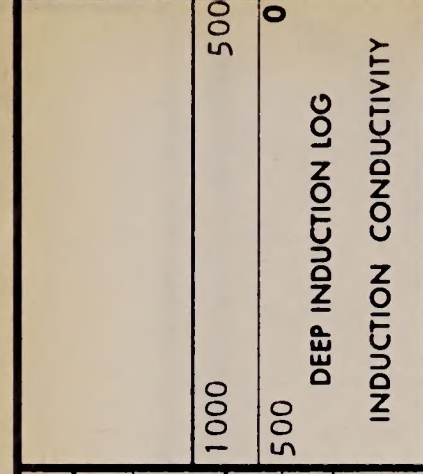
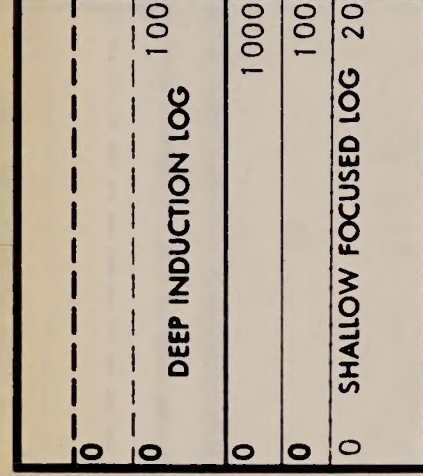
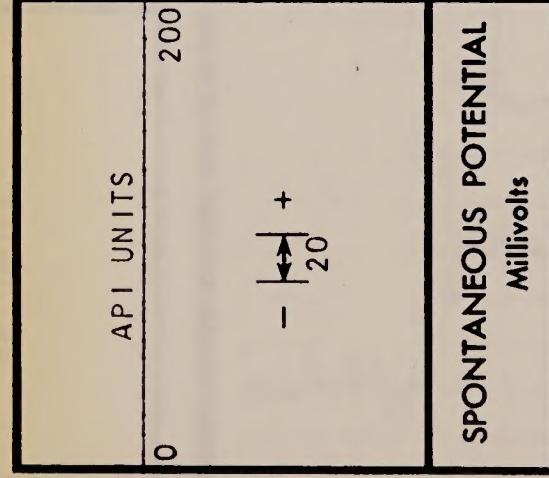
100

$$20 \quad \begin{array}{c} + \\ \hline - \end{array}$$






FORM 925244 A

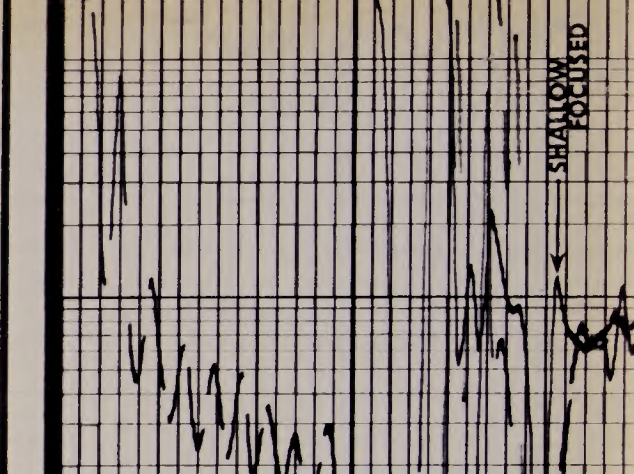
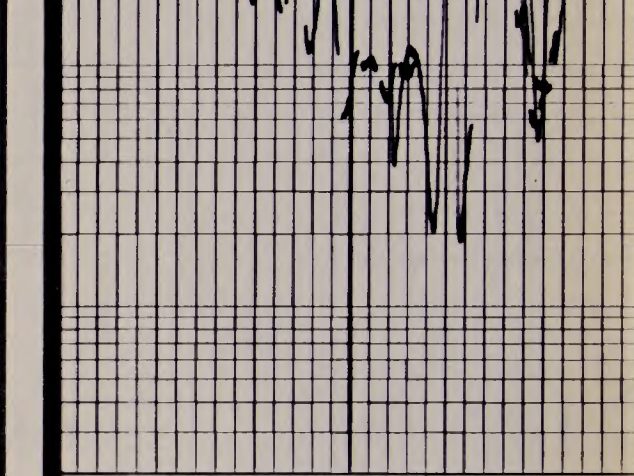
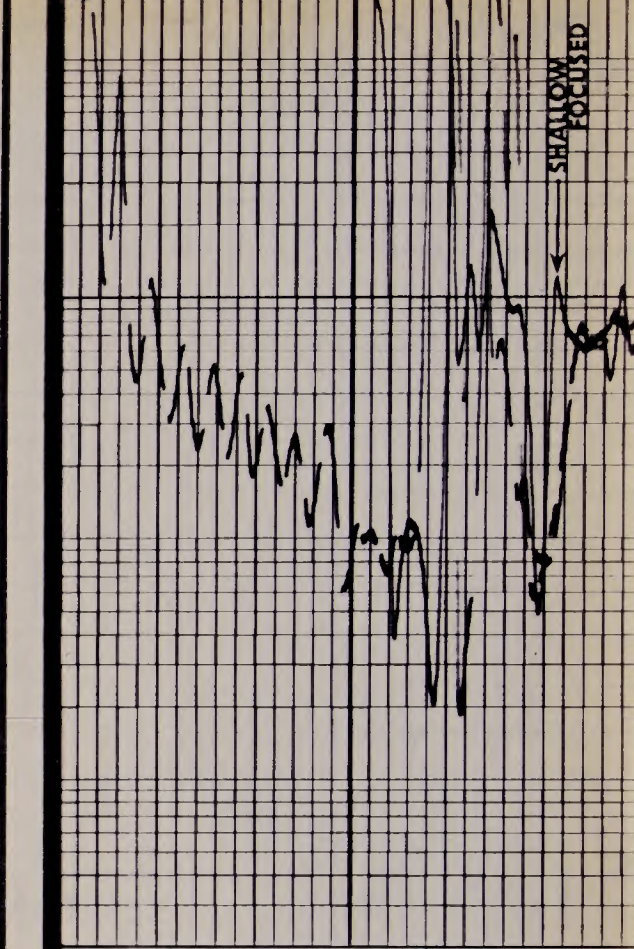
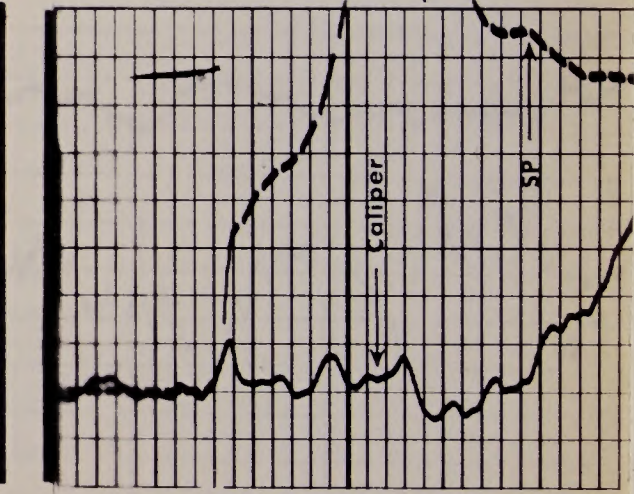
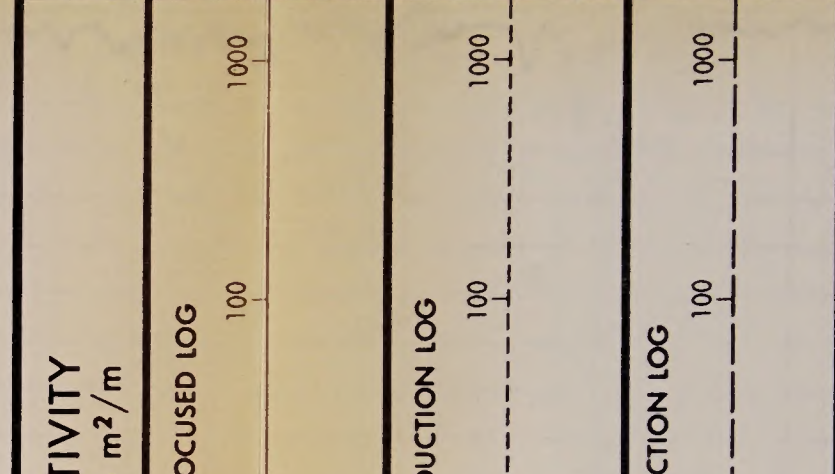
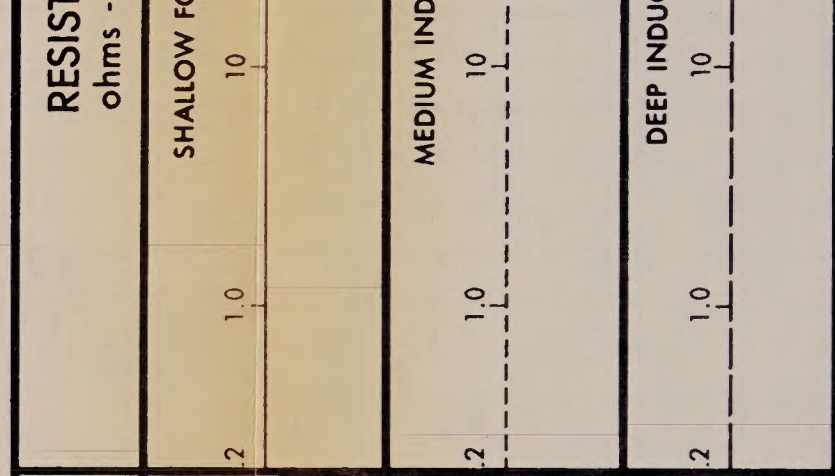
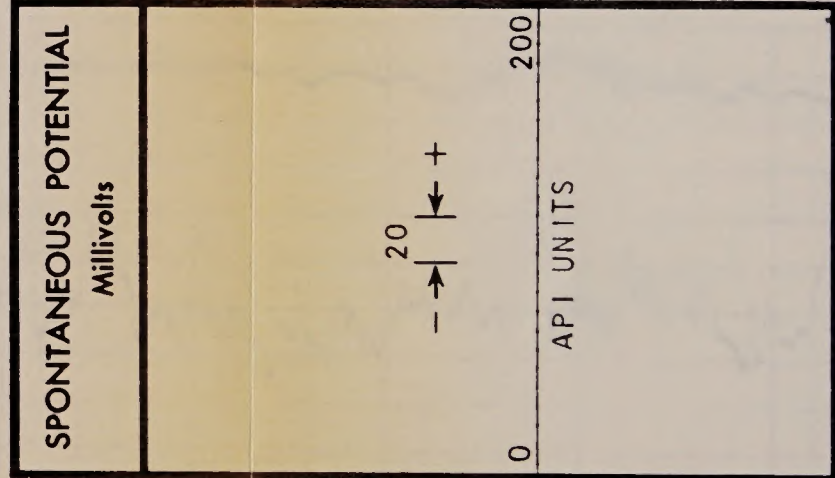


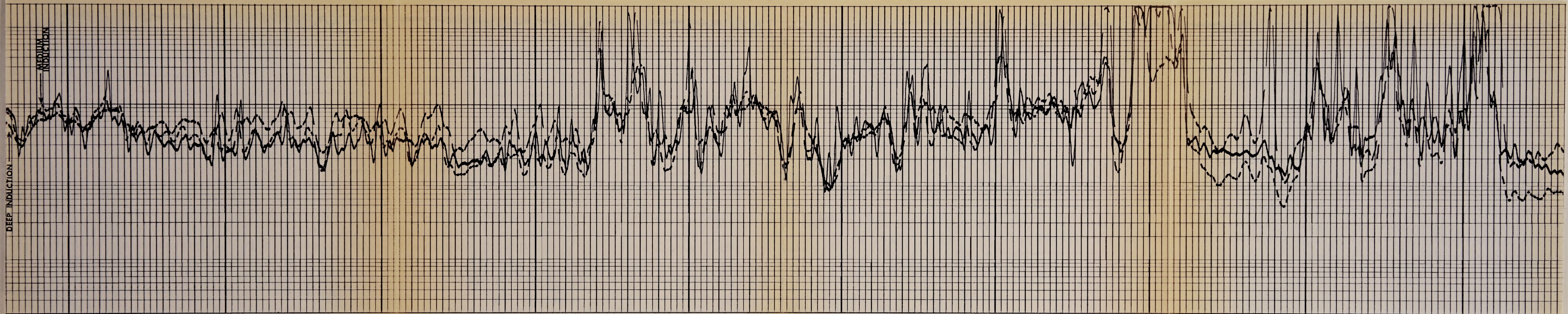
SPONTANEOUS POTENTIAL
Millivolts

RESISTIVITY
Ohms m^2/m

CONDUCTIVITY
Millimhos/m

Company ESI DRILLING CO.
Well # 03
Field WILDCAT
County RIO BLANCO
State COLORADO
Drillers T.D. 2531
Log F.R. 2529
Log T.D. 2531
Elevations:
K.B. 6288 D.F. G.L. 6284





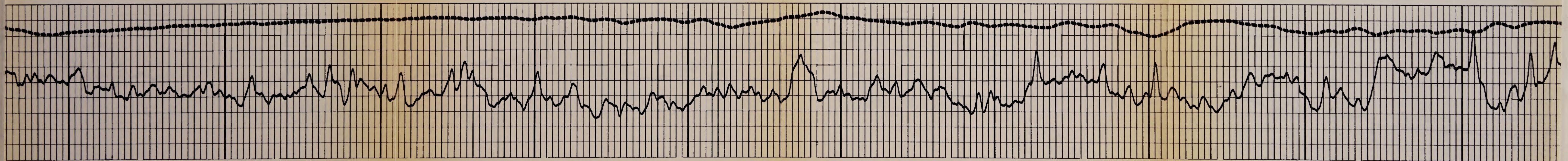
200

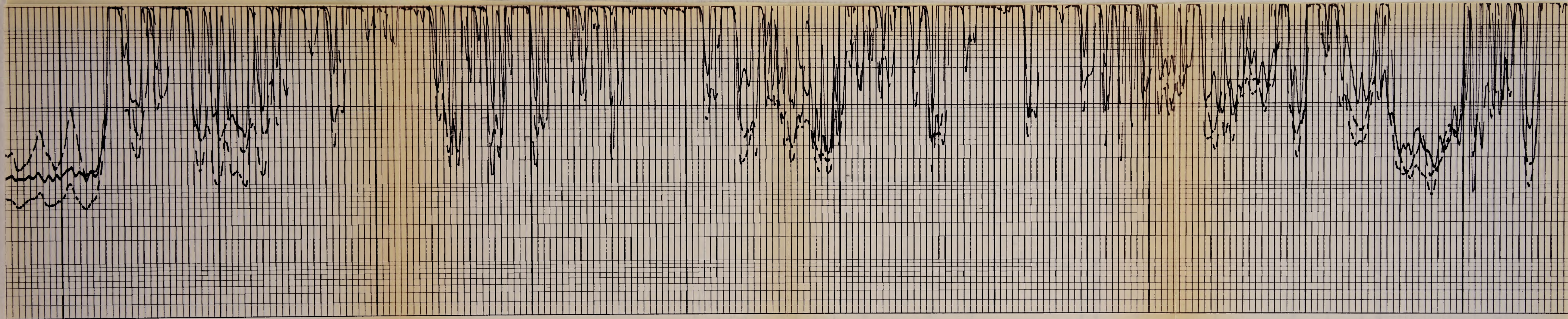
300

400

500

600





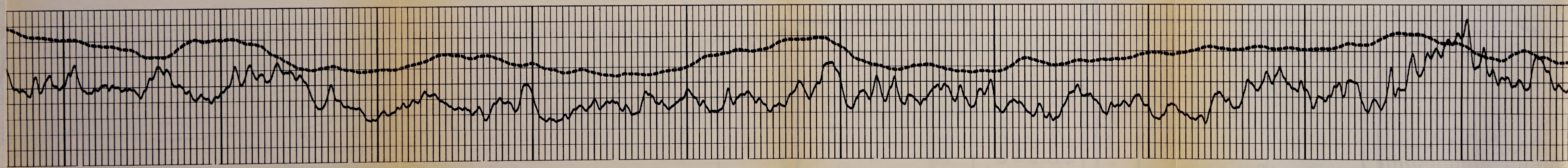
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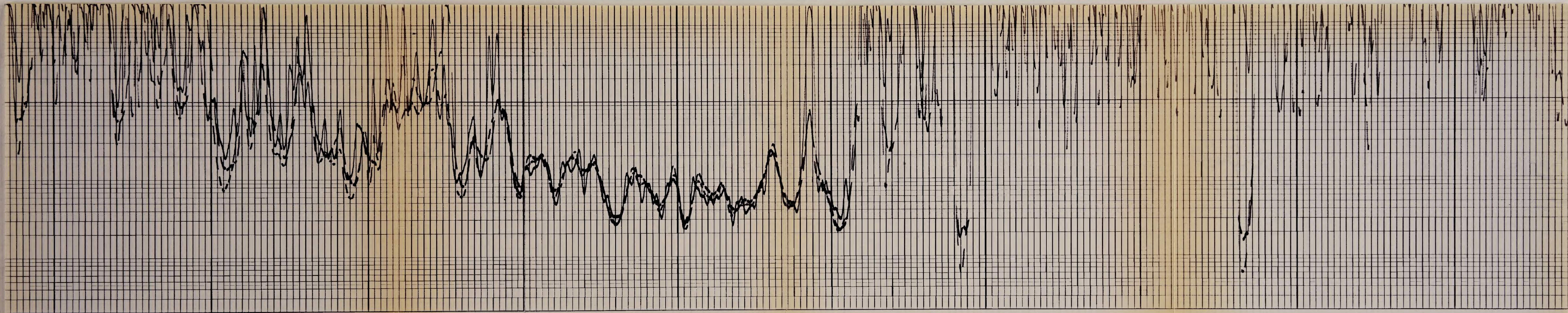
800

900

1000

1100





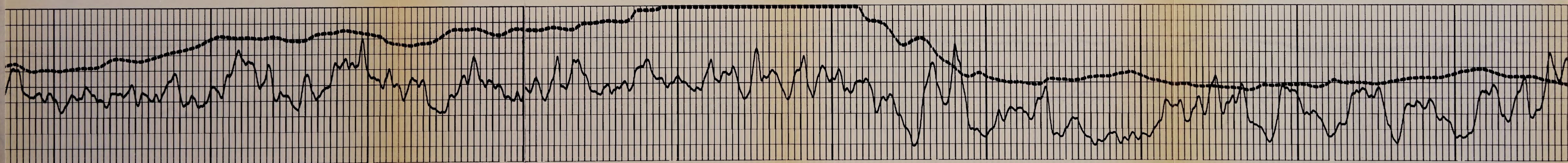
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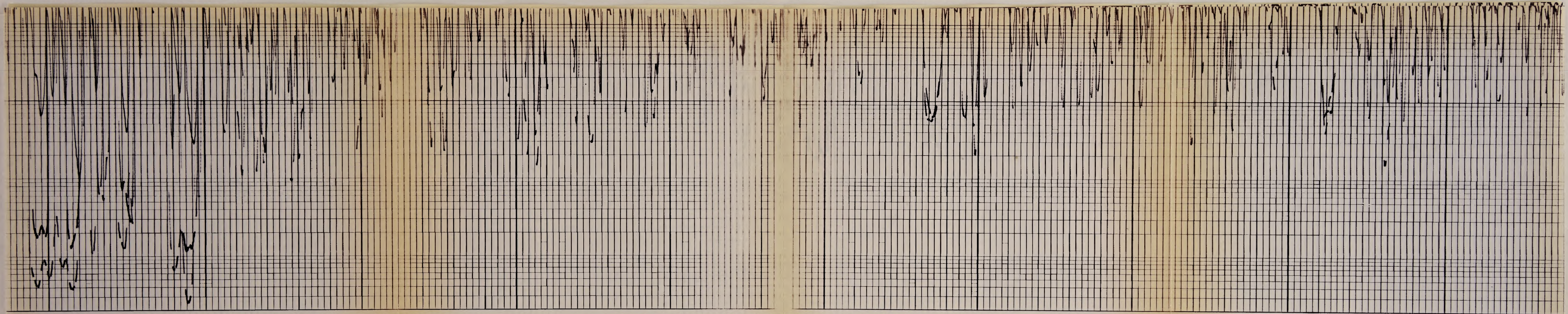
1300

1400

1500

1600





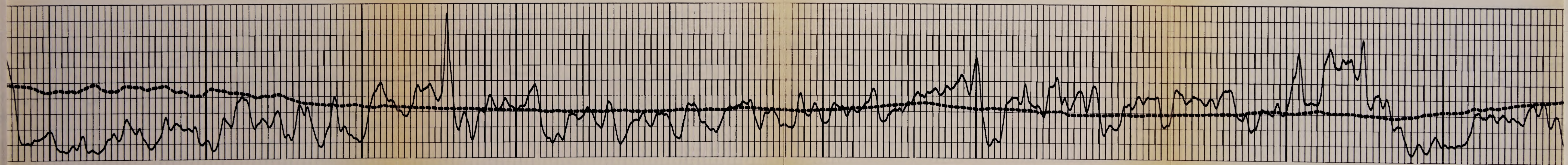
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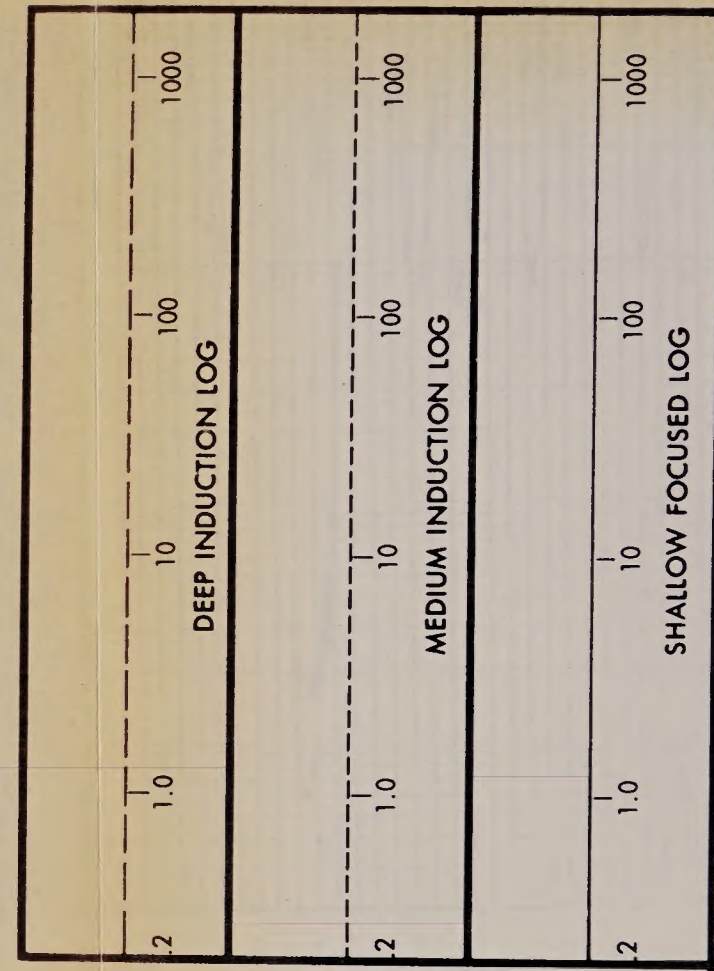
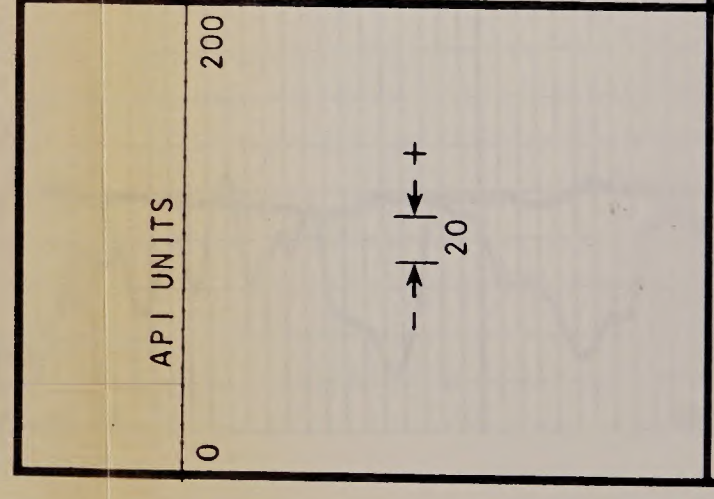
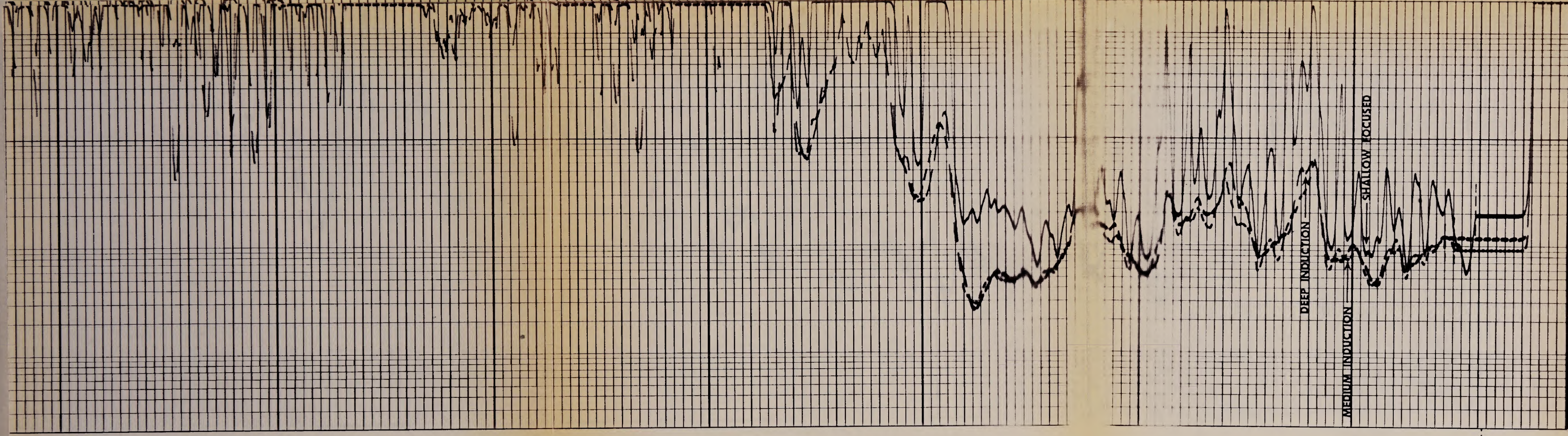
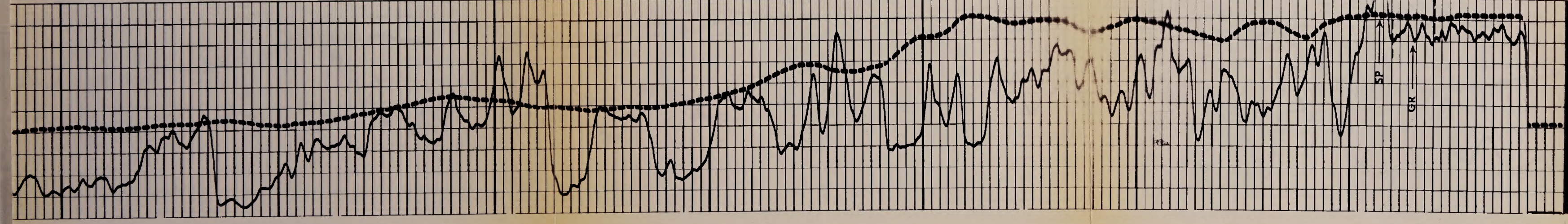
1800

1900

2000

2100

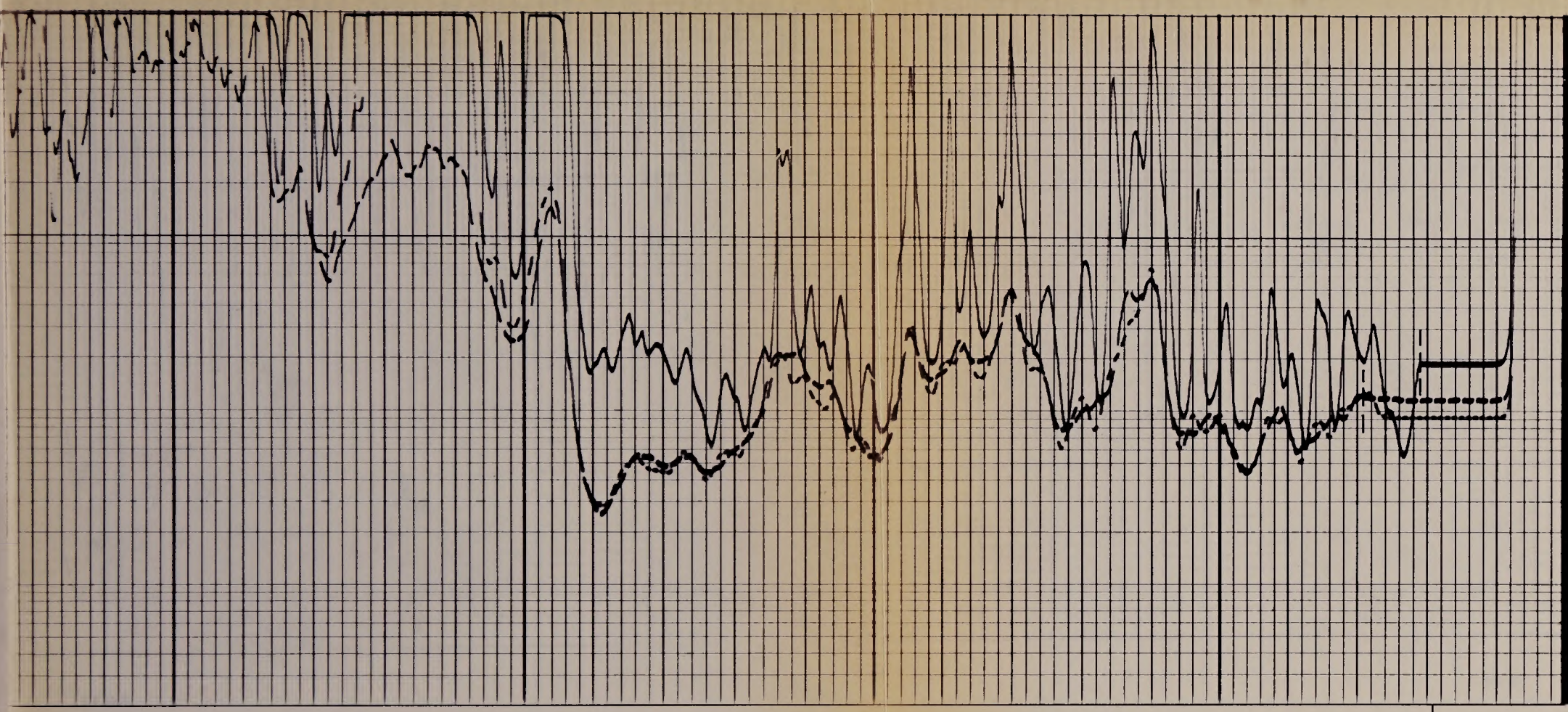
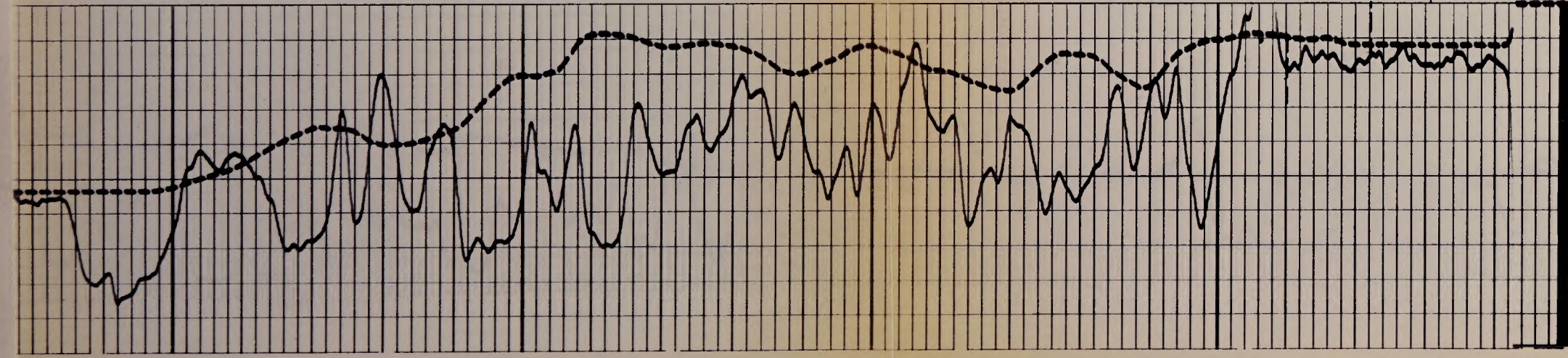




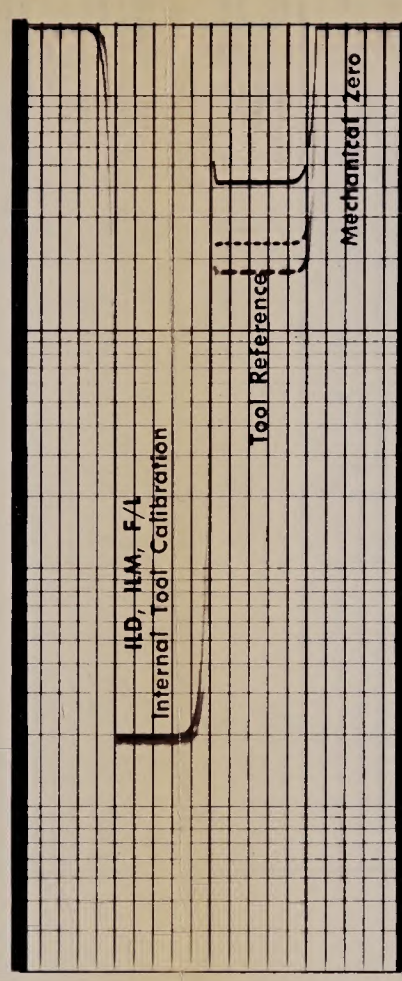
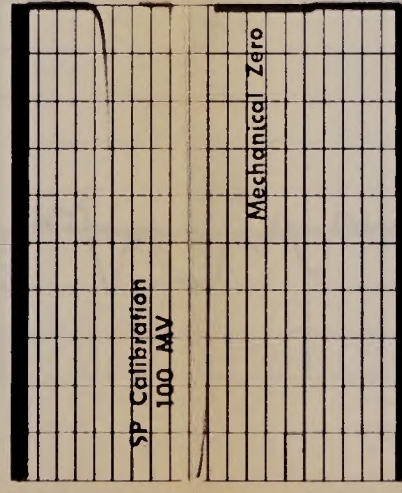
SPONTANEOUS POTENTIAL Millivolts		DEPTH	RESISTIVITY ohms - m ² /m	
0			2	1.0
200			2	10
			2	100
			2	1000

Company	ESI DRILLING CO.	Drillers T.D.	2531
Well	# 03	Log F.R.	2529
Field	WILDCAT	Log T.D.	2531
County	RIO BLANCO	Elevations:	
State	COLORADO	K.B. 6288	D.F.
			G.L. 6284

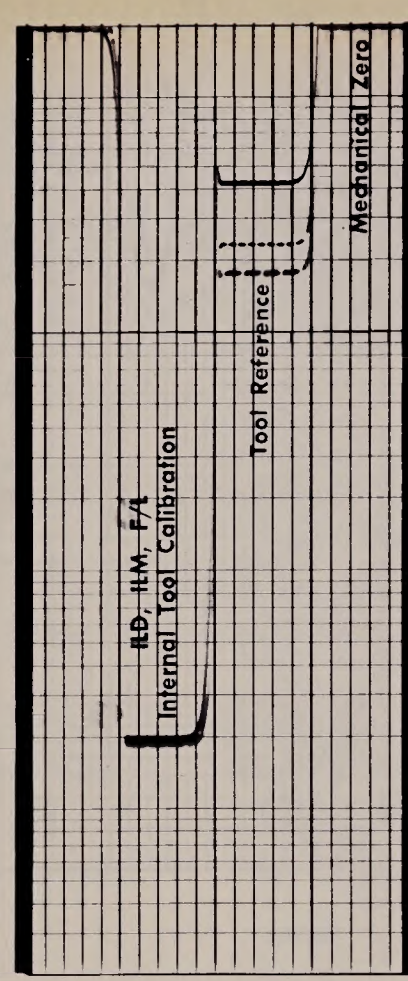
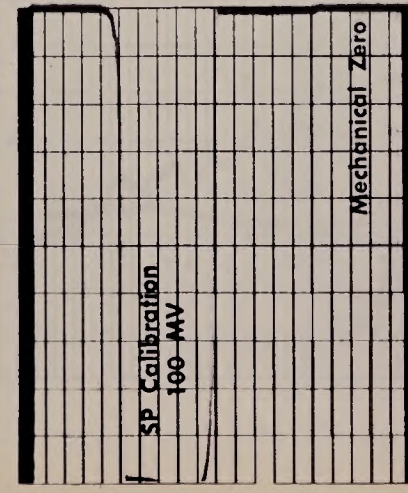
REPEAT SECTION



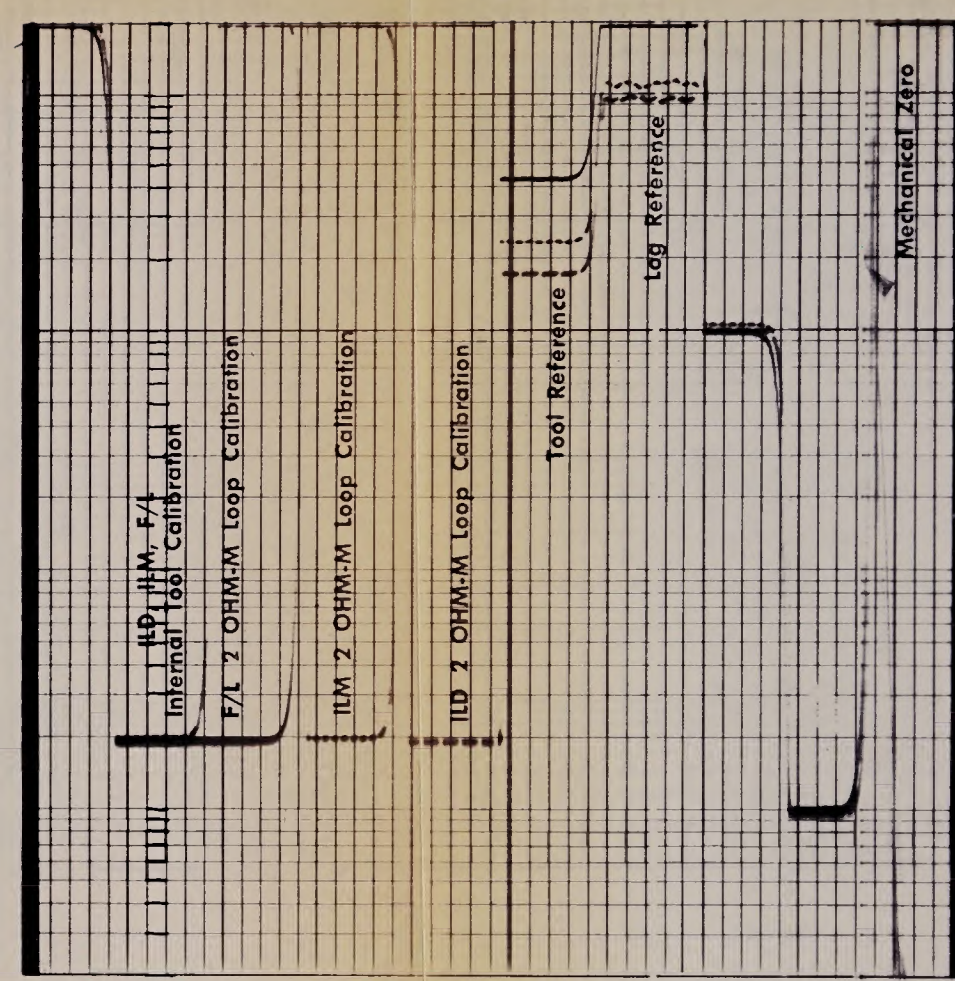
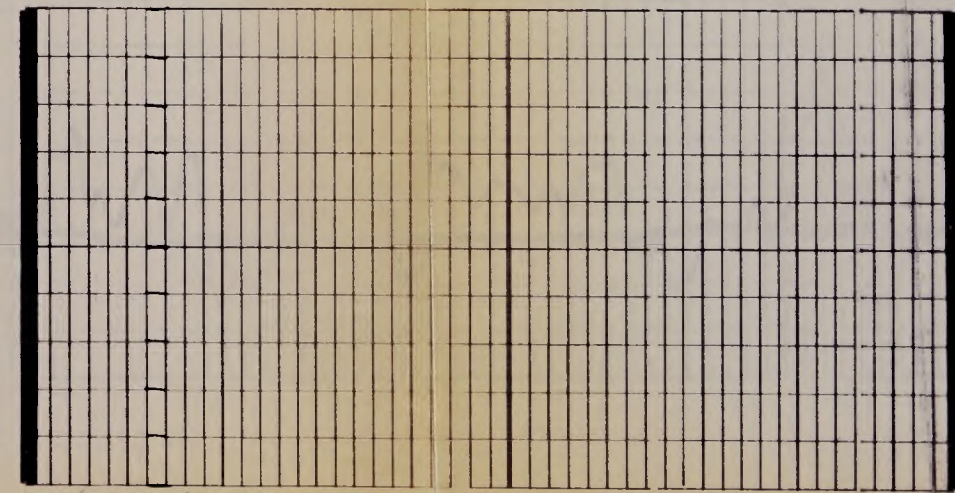
CALIBRATION — AFTER SURVEY



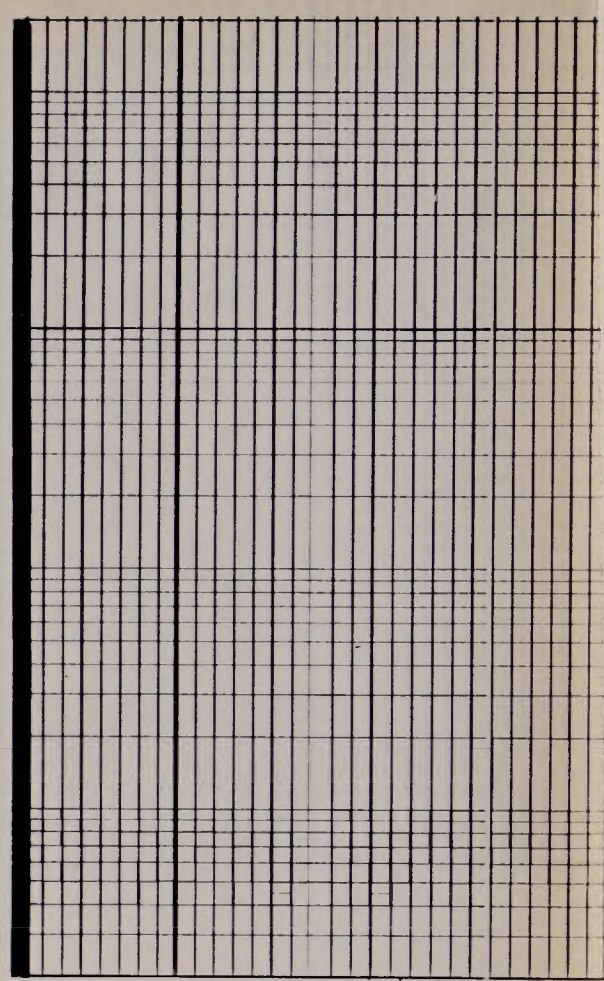
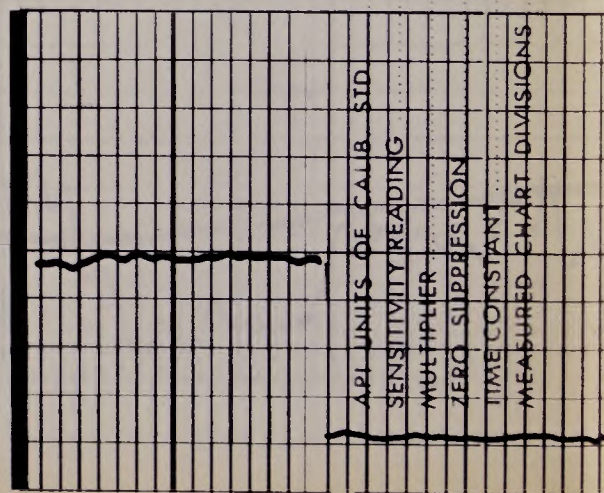
CALIBRATION — BEFORE SURVEY



SURFACE CALIBRATION



G/R LOG CALIBRATION
AFTER LOG

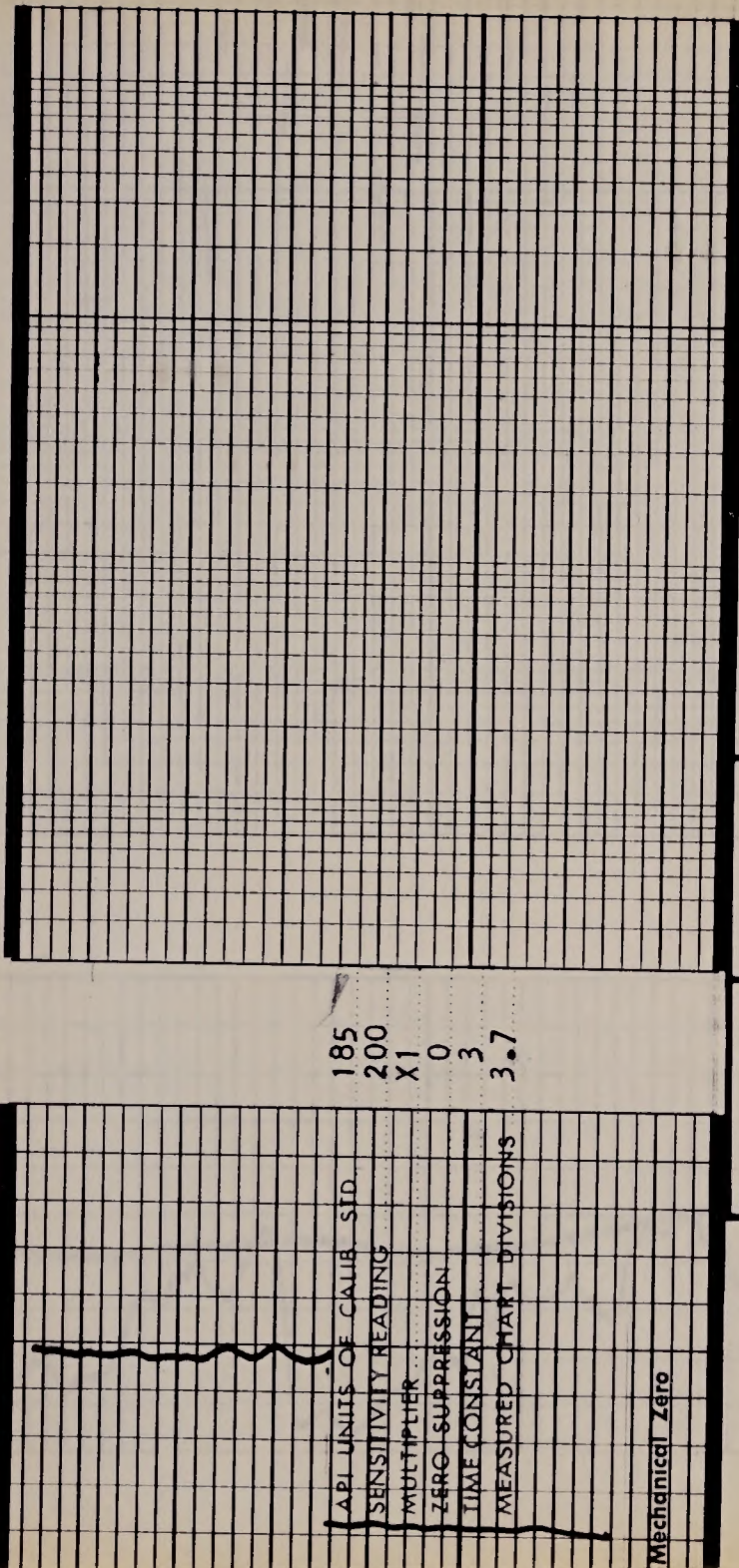


API UNITS OF CALIB. STD
SENSITIVITY READING
MULTIPLIER
ZERO SUPPRESSION
TIME CONSTANT
MEASURED CHART DIVISIONS

185
200
X1
0
3
3.7

Mechanical Zero

G/R LOG CALIBRATION
BEFORE LOG



Dresser Atlas
WIRELINE SERVICES

DRESSER

Division of Dresser Industries, Inc.

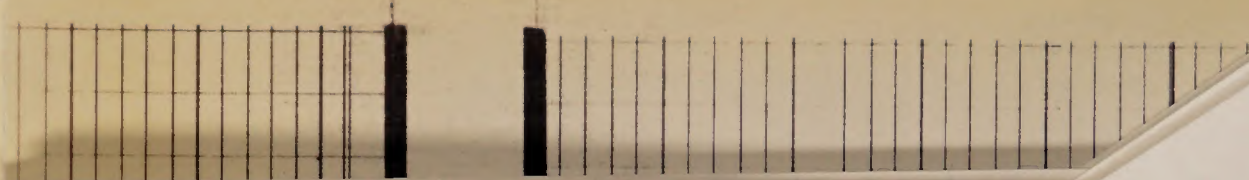
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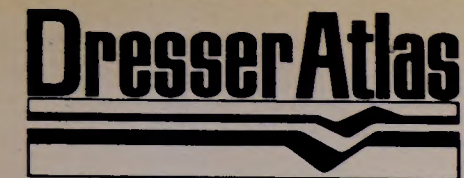


#4971221

ID: 88075059

Differential

Temperature Log



Differential Temperature Log

FILE NO. _____ COMPANY ESI DRILLING CO.
TIGHT HOLE WELL PILOT HOLE "X"
FIELD WILDCAT
COUNTY RIO BLANCO STATE COLORADO
LOCATION: 420 E/WL 1650 N/SL Other Services
6 TH P.M. CDL-GR
SEC 29 TWP 1S RGE 97W DIFL
SURVEY
4-ARM CAL.
Permanent Datum GROUND LEVEL Elev. 6284 KB 6288
Log Measured from K.B. 4 Ft. Above Permanent Datum DF
Drilling Measured from K.B. GL 6284

Date 10-25-76
Run No. ONE
Type Log DIFF. TEMP.
Depth-Driller 2531
Depth-Logger 2534
Bottom Logged Interval 2534
Top Logged Interval G.L.
Type Fluid in Hole GEL
Salinity Ppm Cl. 20,000
Density Lb./Gal. 8.5+
Level 145
Max. Rec. Temp. Deg. F 113.0
Opr. Rig Time 1.5 HRS.
Recorded By WHITE-MILHOAN
Witnessed By MR. SNOW

Run No.	Bore Hole Record				Casing Record	
	Bit	From	To	Size	Wgt.	To
1				8 5/8	---	156
2	6 1/4	156	2531			

REMARKS

A. P.

Equipment Used

Run No.	ONE
S. O.	24923
Tool No.	2111
Elec. No.	2111
Panel No.	24202

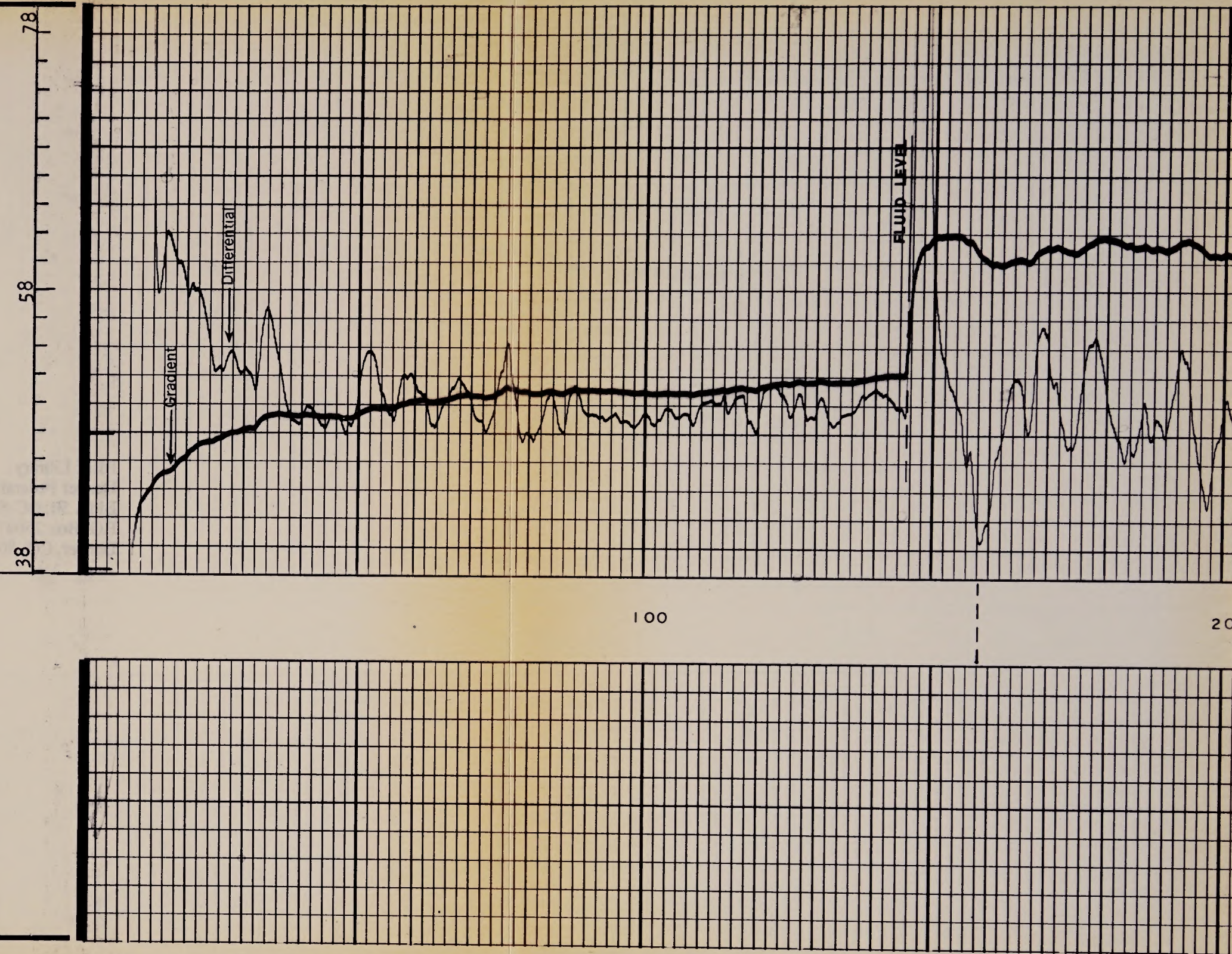
DIFFERENTIAL TEMPERATURE LOG DATA

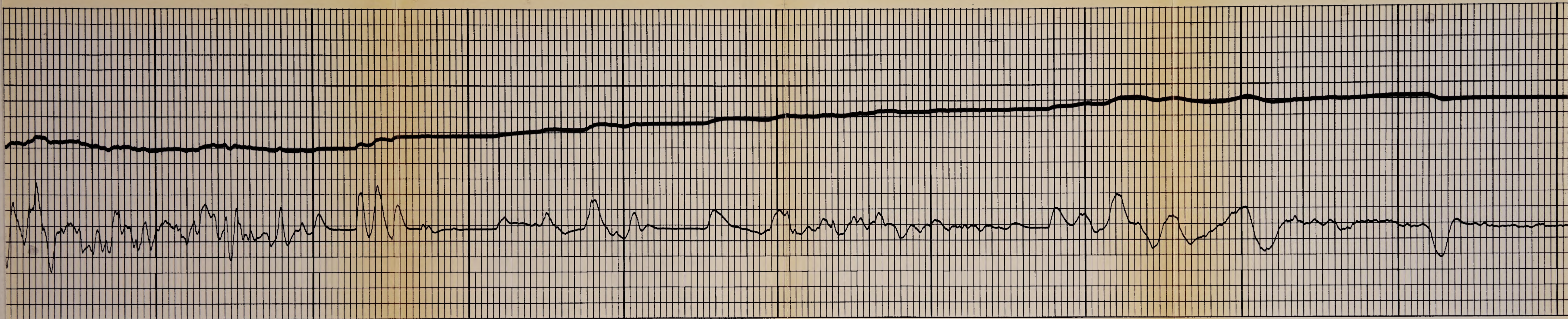
INSTRUMENT DATA

Run No.	1	2	3	4
Date - Time	10-25-76 22:15			
Tool Model No.				
Tool Serial No.	2111			
Truck No.	6110			
Gradient Sens.	2 DEG./C.D.			
Differential Sens.	10			
Logging Speed	RECORDED			
Type Well	EXPLORATION			
Log Purpose	N/A			
Fluid Level	145'			
Well Pressure				
Shut In Time	6 HRS.			
Injected Fluid Temp.				
Inj./Prod Fluid Type				
Inj./Prod Rate				
Inj./Prod Volume				
Inj./Prod Time				
Cross Flow Check				

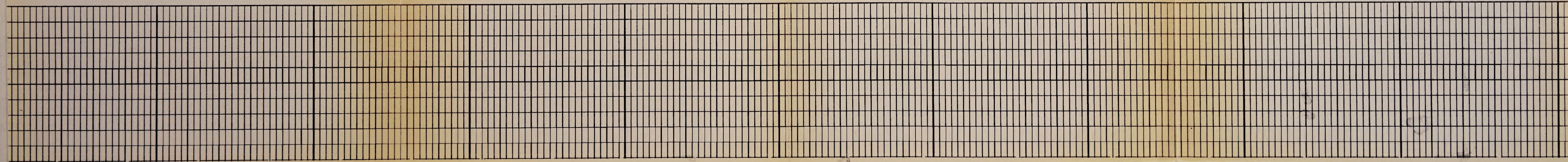
Instrument Dia. 1.7"

TEMPERATURE SURVEY

TEMPERATURE - °F
2° F. PER C.D.



0 300 400 500 600 700





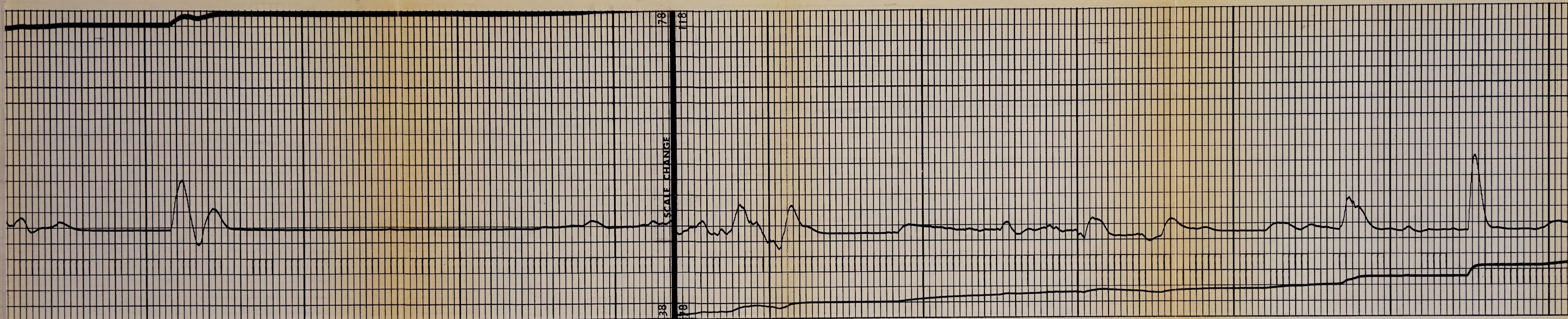
800

900

1000

1100

1200



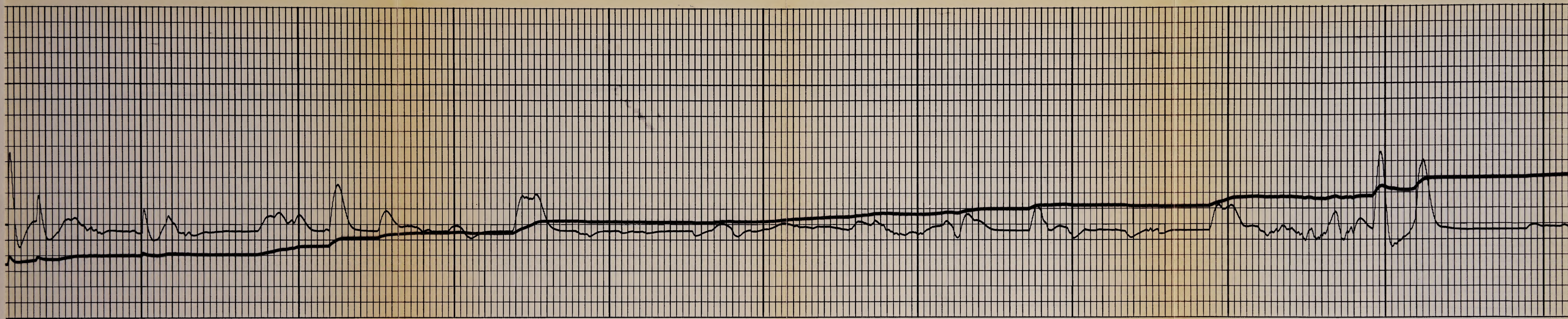
1300

1400

1500

1600

1700



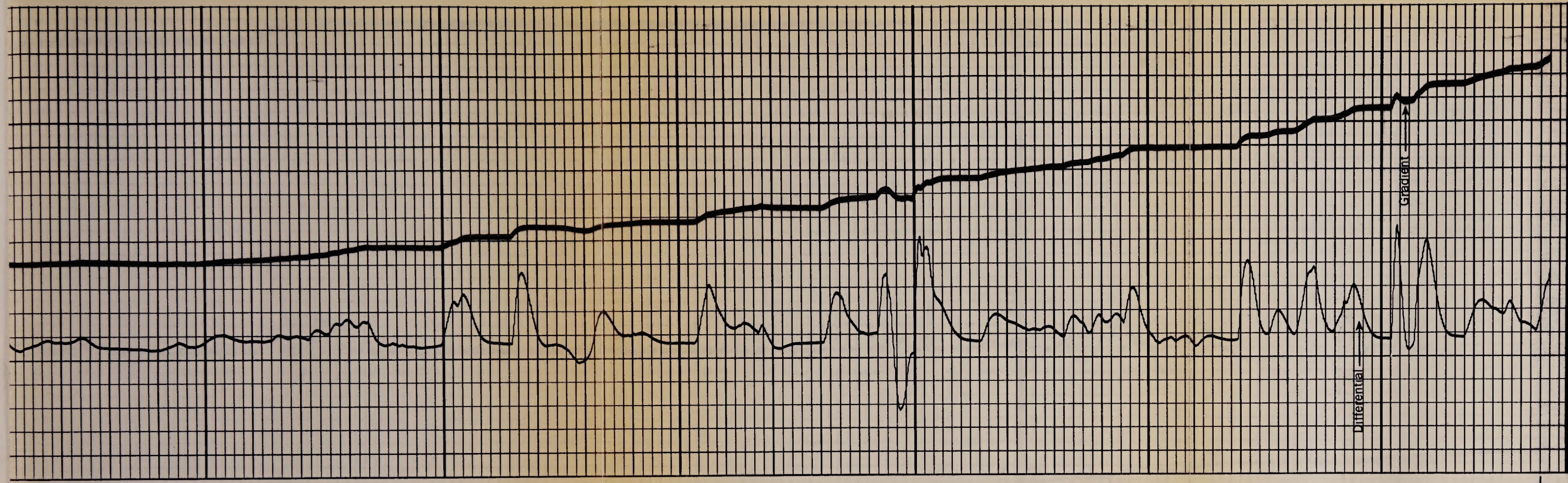
1800

1900

2000

2100

2200



78 98 118

TEMPERATURE - °F
2° F. PER C.D.

TEMPERATURE SURVEY

Company	ESI DRILLING CO.	Drillers T.D.	2531
Well	# 03	Log F.R.	G.L.
Field	WILDCAT	Log T.D.	2534
County	RIO BLANCO	Elevations:	
State	COLORADO	K.B.	6288 D.F.
		G.L.	6284

#4971221

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